



Systema Medicinale,
A
COMPLETE SYSTEM
OF
PHYSICK,
Theorical and Practical.

In Six Books.

Containing the Names, Definitions, Differences,
Parts affected, Signs, Causes, Prognosticks, and Va-
rious Methods of Curing all the Principal Diseases,
happening to the Bodies of

Men, Women, and Children.

Translated out of Latin into English, out of the most
Learned *John Doleus*, being a Summary of the Ancient and
Modern Way of Practice, collected chiefly from *Hippocrates*,
Galen, *Paracelsus*, *Helmont*, *Willis*, *Sylvius*, *Cartesius*, and others;
wherein both the *Galenick* and *Chymick* Methods are particular-
ly and specially Explicated and Exemplified: Brought into this
portable Volume for the Publick Good.

Whereunto is Annexed

A Prefatory Discourse concerning the Method of Stu-
dy and Practising Physick; and other Accommodations re-
lating to the same.

Written by *WILLIAM SALMON* Professor
of Physick, living at the Blew Balcony by the Ditch-side, near
Holborn-Bridge, LONDON.

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THE PREFACE.

I. **W**Hat we are to inform the Reader of here, are principally two things: the one is concerning the Original of this Work: the other concerning the method of studying and practising the Art of Physick and other Accommodations relating to the same.

II. The Author hereof was one John Dolæus, Doctor of Physick, and a German Vertuoso, one of that Society which has published the German Ephemerides; a Work much like our Philosophical Transactions of the Royal Society. He was also Physician to the Landgrave of Hesse, and in his own Person accompanied that Illustrious Prince, in the Famous Expedition to raise the Seige of Vienna.

III. As to the Work, we shall leave it to speak for it self, being founded upon the Divine Hippocrates, and his Interpreter Galen, and compleated from the Advancements of Paracelsus, Helmont, Sylvius, Cartesius, Willis, and their Followers; besides the Author's own Experience, who with an exact Judgment has given you the Sum of the old and new Physick, the Galenical and Chymical Theory and Practice. So that having this one Author, you have a Library, and the Sum of all you can expect from

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so many Volumes. And he has been so ample upon some Diseases, that he has laid (as it were) the Foundations of the Art therein, and given you an Exemplar, how to do the like in others.

IV. Here is also given a Solution of the Cause of Diseases, according to the Cartesian Principles, which I confess, I have not met with else where, in other Authors. And although you will find herein much new matter, yet nothing, but what is confirmed by the Suffrage of Great Judgments, and the most Learned Men of this latter Age.

V. The next thing which we are to instruct you in, is, The Method of studying and practising Physick; which because we cannot so well do, unless we render you an Account of the whole Art, and of its Parts, be pleased to take it in the following Words.

VI. Physicians have divided the Art, some into five Parts, viz. Physiologia, Pathologia, Semiotica, Hygieine, and Therapeutica: Some but into four Parts, viz. Physiologia, Pathologia, Hygieine, and Therapeutica: Others but into three Parts, viz. into the Physiologicks, the Pathologicks, and the Therapeuticks, which last Division, best suits with our intended Method.

VII. *Φυσιολογικὴ*, in Rerum naturalium Contemplatione Versatur; wherein is considered the Anatomicks; 1. In the Structure of the Humane Body. 2. In the Physical state of the same.

VIII. Anatomie, or the Structure of Man's Body, is a complete description thereof, representing in a proper method, both with fit Words and curious Figures, the exquisite Idea of the whole Humane Frame. The Order whereof in few Words, we have already

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already done in a particular Treatise at the latter end of our Synopsis Medicinæ, the latter Edition.

IX. The Physical State of the same, is considered in the disquisition of all natural things relating to the aforesaid Compositum, in respect of Formation, Structure, Composition, Preservation, Agitation, Affections, and Dissolution; wherein also is considered, 1. The Materia Medica. 2. The Parascuologia.

X. The Materia Medica, is considered in a threefold respect, as it has relation to the threefold Kingdom; viz. Vegetable, Mineral, and Animal.

XI. Botonologia, or Phytologia, is that which teaches the Figures, Names, Kinds, Descriptions, Differences, Places, Times, Temperature, Appropriations, Virtues, Uses, Qualities, and various Preparations of Vegetables; as they have relation, 1. To English Herbs and Plants. 2. To English Trees and Shrubs. 3. To Exoticks, so many as we use in Physick. The which we have already completely performed, in a Folio Herbal now in the Press.

XII. Minerologia, is that which teaches the Names, Kinds, Choice, Growth, Virtues, Use, Qualities, and various Preparations of all Mineral Bodies, viz. of Earth, Stones, Salts, Sulphurs, Excrements of Metals, Semi-metals, and Metals.

XIII. Zoologia, is that which teaches the Icons, Names, Kinds, Descriptions, Place, Virtues, Uses, Qualities, and Preparations of all Kinds of Animals, viz. of Birds, Beasts, Serpents, Fishes, and Insects.

XIV. The Parascuologia, is considered as it has
A 4 relation

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relation, 1. To the Preparation of Medicines, 2. To the Medical Store.

XV. The Preparation, is that which teaches the various ways of fitting, preparing, and making up of Medicaments, according to the Galenick, Chymick, and Rational Methods, and that from the whole Materia Medica, whether Vegetable, Mineral, or Animal.

XVI. The Galenick Method, teaches the way of Preparation of all sorts of Medicaments from the whole Materia Medica, which are, I. Internal, as, 1. Infusions. 2. Decoctions. 3. Emulsions. 4. Syrups. 5. Juleps. 6. Lohochs. 7. Quiddonies. 8. Preserves. 9. Conerves. 10. Sugars. 11. Powders. 12. Electuaries. 13. Pills. 14. Troches. II. External, as, 1. Lotions. 2. Oyls. 3. Balsams. 4. Oyntments. 5. Cercloths. 6. Emplasters. 7. Cataplasms. 8. Clysters.

XVII. Chymistry, teaches the way of the Preparation of various kinds of Medicines from the whole Materia Medica also; the chief of which are, 1. Waters distilled. 2. Spirits. 3. Oyls distilled. 4. Balsams distilled. 5. Powers. 6. Elixers. 7. Tinctures. 8. Extracts. 9. Magisteries. 10. Salts. 11. Liquors. 12. Wines. 13. Vinegars. 14. Essences. 15. Flowers. 16. Glass. 17. Sulphurs. Of all which, both Galenick and Chymick, many Examples may be seen in our Pharmacopœia Londinensis, of late Years emitted into the World.

XVIII. The Rational Method, teaches how to prepare likewise, from the whole Materia Medica, these several Forms, 1. Waters, 2. Oyls. 3. Balsams. 4. Spirits. 5. Powers. 6. Elixers. 7. Tinctures,

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Tinctures. 8. Essences. 9. Species. 10. Empla-
sters, according to a natural and rational way,
wherein the Virtues, Powers, and Forces of Me-
dicines are intirely preserved, without Addition,
Diminution, or Alteration.

XIX. *The Pharmacologia, or Medical Store,*
(which the Prudence of Antiquity, and Wisdom of
all Ages, has ordered to be kept in the Apothecaries
and Chymists Shops, to answer the Exigency of all
Occasions) contains the Names, Number, Compositi-
ons, Preparations, Virtues, Uses, and various Doses,
of certain select, approved, and experienced Medi-
caments; together with an Estimate of the Powers
and Forces of those mostly in use, which the prudent
Physician is to draw forth, and use as the nature and
necessity of his occasion requires. The which we have
already done in Our Pharmacopœia Londinensis,
hitherto of the Physiologick Part of Physick; the
Pathologick follows.

XX. *Παθολογική, in rerum præter naturam con-*
sistit. Wherein is considered the General Method
of Indications of Diseases, Diagnostick, Ætiolo-
gick, and Prognostick.

XXI. *The Diagnosticks, shew (not so much sim-*
ply the Signs of Diseases, as) the Signs of the vari-
ous Causes, whereby the cause may be known and un-
derstood: for if the Disease be known by its Pa-
thognomick Signs, yet if the Cause be not under-
stood, the Cure will be very doubtfully attempted;
for the Medicaments for removing of the Di-
sease, must be contempered, according to the Na-
ture, Variety, and Mixture of Causes effecting.

XXII. *The Ætiologicks, shew the several and*
various

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various Causes of Diseases, according to their several Kinds or Differences: for as one Disease may have several Causes from which it may arise; so the several Kinds or Differences of it, will yet have different Causes from the first, either simple or mixed, according to the Symptoms and Complication of the Disease.

XXIII. *The Prognosticks, are deduced from the Symptomick Appearances of the Disease; whence, according to the Strength and Vigor of the Sick, the Vehemency or Remissness of the Symptoms, and their various alterations or changes, the Physician is made able to judge, whether the Disease may be curable or not, or probably may end in Life or Death. The Therapeuticks, now remain to be considered.*

XXIV. *Θεραπευτικὴ, medendi rationem Dietâ, Chyrurgiâ, Pharmaciâque præscribit. Herein is considered the General Indications of Cure, Diætetic, Chyrurgick, and Pharmaick.*

XXV. *Hygieine, or the Diætetic Cure, is considered in a two-fold respect. 1. As it has relation to the preservation of Health, or prevention of Diseases, consisting in the true Knowledge and right Government of the Body in respect to the six Non-naturals. 2. As it has relation to the Government and Diet of the diseased.*

XXVI. *Chyrurgia, or Chyrurgery, teaches the Names, Numbers, Kinds, Parts affected, Signs, Causes, Judgments, and particular ways of Curing all external Diseases; As 1. Tumors. 2. Wounds. 3. Ulcers. 4. Fractures. 5. And Dislocations. Together with the Names, Numbers, Descriptions, and*

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and several Uses of all the Chyrurgick Instruments; and the Method of Pollicination or Embalming, whether Ancient, as the Egyptian and Jewish; or Modern, as the Greek, Roman, or English.

XXVII. *Pharmaica*, the *Pharmaicks* commonly and properly with us called *Physick*, is that which teaches us the Names, Kinds, Parts affected, Signs, Causes, Judgments, and various ways of Curing of all Internal Diseases, whether General or Particular, Acute or Chronick, happening to the Bodies of Men, Women, and Children.

XXVIII. Thus in short have we run through the whole Art of *Physick* in its principal Branches (to descend to particulars in this place we cannot) wherein you must note, that the NAMES. 1. Of the Principal Parts of Man's Body. 2. Of Diseases. 3. Of Herbs, Plants and Trees. 4. Of Minerals, as Metals, Semi-metals, Stones, and Earths. 5. Of Animals, as Birds, Beasts, Serpents, Fishes, and Insects, are to be known, learned, and understood in Greek, Latin, and English, that the Industrious Artist may be the more ready for the reading and understanding of Authors: And withal, that he be knowing and skilful, in all the Icons or Figures used in the Medical Learning, whether Anatomical, Chyrurgical, Phytological, Zoological, or Chymical, that he may not be imposed upon by any Medicaster pretending to our Art.

XXIX. In order therefore for the more Exquisite and Honourable Study and Practice of these Arts, the young Physician, ought First, to be thoroughly learned in all the preceding Branches of the same, and that he might be the more absolutely accomplished

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complished for it, he ought to revolve Antiquity ; to examine and scrutinize the various Judgments and Observations of the most Eminent Physicians , and daily read all the more approvable Authors extant.

XXX. Secondly, He ought to draw up the sum of his diffused Knowledge into a short and succinct Method, that he may not only know how to apply Precepts to his Practice ; but also be able to justify his Practice by the Precepts of the Art , and the Opinions of the Great Masters of the same ; not forgetting all this while , to make use of his own Judgment and Reason, in all his practical Conclusions.

XXXI. Thirdly , He ought to be knowing in all manner of Drugs , that he may not only tell what their Names are, but be judge of their Goodness, Virtues and Uses , and be able to make a choice of the best, if necessitated thereto.

XXXII. Fourthly , He ought also to spend some time, at least a year or two, with an Apothecary, that he may not only dispence the Composition of Medicines, but be versed in their Preparations and Mechanick mixtures, which though those things may at first seem below the Dignity of a Physician , yet this he is to understand, that he shall never be an able Artist without it.

XXXIII. Fifthly , He ought to live at least a year with some able Chymist, and go through an ample Course of Chymistry ; not that it is requisit for him to make and prepare every Medicine, which Chymists have taught in their Books ; but, that he ought actually to go through every kind of Process , and perform the operation with his own hand. And thus
by

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by knowing how to make one Medicine of that kind, he will know how to make an hundred of the same; whereby he will conceive the Mystery, Nature and Reason of the Art, and from thence, as out of a Store-house, fetch the Preparation of any Medicament whatsoever, at pleasure.

XXXIV. Sixthly, He ought not only to read Anatomy constantly, but also frequently to see Dissections; and thence, partly by his Reading, partly from his own Observations, to draw up a kind of Anatomical Scheme, that the complete Idea of the whole Humane Frame, being constantly in his Mind, he may be the more able to contemplate Diseases, search out their hidden Causes, and to prepare fit and proper Medicaments for the Cure.

XXXV. Seventhly, He ought constantly in the Summer time to Herbarize, that he may at sight know the Herb and its kind, from the presence of which, the Virtues, Natures, and Qualities thereof will present themselves to his Mind, whereby the Power and Energie of the Art will (as it were) by degrees be implanted in his Soul.

XXXVI. Eighthly, He ought to spend two years at least with a Practical Chyrurgion, that he may see, and withal help to perform all the Manual Operations of Chyrurgery; and that if possible in an Hospital, where he will constantly see great Variety. Without this Knowledge, let him pretend what he will, and use all the Industry he can, he will be but an imperfect Master of his Art.

XXXVII. Ninthly, These things being done, before ever he adventures to give or prescribe any Medicament of his own, he ought to live two or three

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three years with some eminent Physician, and a man of Practice, where he is to visit the Patient, observe the Disease, and its Symptoms, scrutinize into the Cause, take notice of his Master's Prescriptions, and make Observations of the Effects of every Dose, how it wrought, and the Operation upon that Constitution; all which things he ought constantly to commit to writing, that by revolving the same he may (when he comes to practise) be able to do the like. Hitherto of the Method of Studying, and coming to the knowledge of the Art of Physick: it now only remains to give Directions to a young Physician, how he should manage the Practice thereof.

XXXVIII. As to the Practice of Physick, this is to be understood, that the Learned Physician uses not so much Levity, as to try all sorts of Medicines which Physicians have in their Books prescribed, nor often to change their Medicaments; he that shall do so, shall never know the true worth of any one, but be always to seek. Whereas if he be a man of good Judgment, and able to make a Choice, he may by his Diligence in Reading be able to draw out a select number of the most approvable, which may answer all the Operations and Intentions of Physick, and absolve the whole Practice of the same.

XXXIX. With the constant use of these he will get Credit, and in a short time be able to know truly, whatever they will do; whereas otherwise, he would never be able to judge or know the true Worth of a Medicament.

XL. But whereas things are best taught by Example,

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ample, We will here exhibit a Catalogue of such as we constantly make use of in our Practice, and have tried their Effects for more than twenty years last past. And these we always keep ready prepared by us, being in a manner the very substance of what we practise withal, except some few Arcana, which we are not yet willing to discover to the World: Their Compositions, Preparations, Virtues, Uses, and Doses, you may find at large in the Fifth Edition of Our Polygraphice, lately emitted to the World.

XLI. These Medicines are wholly salubrious, and beneficial to the Body, of a small price, and admirable against the Diseases specified. They will be of excellent use for all Travellers, Soldiers, Sea-men, and such like, who cannot attend upon a Cure, but are forced to go about their Business.

XLII. These things may be taken to Sea with them, where they will stand them in great stead, in all Sea-sicknesses, sickly Seasons, Agues, Scurvies, Poxes, Gouts, Poysons, Fluxes, Feavers, Calentures, and other Diseases, commonly attending, Armies, Camps, and such as go to Sea: By the use of these things, especially in Scurvies, Dropsies, Gouts, Rheumatisms, Agues, Feavers, Calentures, Fluxes, Worms, Intollerable Pains, &c. almost incredible Cures have been done. The like to this may any Physician do for himself, if this pleases him not.

XLIII. Lastly, In the following Catalogue we have given you the Value of each Medicine by the Ounce; all which are firm and durable, so that neither the Sea, Season of the Year, nor Age will

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will spoyl them, if they be kept close; and they may be all had (excepting the two last) faithfully prepared by the Author, at his House in London. To the Giver of every good thing and Fountain of Mercy, be given all Praise, Honour, Glory, and Thanksgiving; and to him (Reader) thou art commended by

From my House at the Blew
Balcony, by the Ditch-
side, near Holborn-
Bridge. 10. January,
1688.

Thy faithful Friend
and Servant,

WILLIAM SALMON.

Catalogus

Catalogus Medicamentorum.

Price per Ounce.

1.	A qua Regulata	0 : 0 : 0
2.	Aqua Bezoartica	0 : 0 : 0
3.	Catharticum Argenteum	0 : 0 : 0
4.	Tinctura Corallorum	0 : 0 : 0
5.	Tinctura Stomachica	0 : 0 : 0
6.	Tinctura Bezoartica	0 : 0 : 0
7.	Tinctura Hysterica	0 : 0 : 0
8.	Tinctura Cathartica	0 : 0 : 0
9.	Tinctura Antimonii	0 : 0 : 0
10.	Guttæ Vitæ	0 : 0 : 0
11.	Tinctura Martis	0 : 0 : 0
12.	Spiritus Nitri Alcoholizatus	0 : 0 : 0
13.	Spiritus Anodynus	0 : 0 : 0
14.	Spiritus Aperiens	0 : 0 : 0
15.	Spiritus Antialthmaticus	0 : 0 : 0
16.	Spiritus Cosmeticus	0 : 0 : 0
17.	Potestates Cornu Cervi	0 : 0 : 0
18.	Potestates Baccarum Juniperi	0 : 0 : 0
19.	Potestates Carui	0 : 0 : 0
20.	Potestates Caryophyllorum	0 : 0 : 0
21.	Potestates Lavendulæ	0 : 0 : 0
22.	Potestates Limonium	0 : 0 : 0
23.	Potestates Mercurii	0 : 0 : 0
24.	Potestates Pulegii	0 : 0 : 0
25.	Potestates Rosmarini	0 : 0 : 0
26.	Potestates Succini	0 : 0 : 0
	27. Po-	0 : 0 : 0

Catalogus Medicamentorum.

	Price per ounce	l.	s.	d.
27. Potestates Terebinthinæ		0	0	6
28. Elixir Proprietatis		0	2	6
29. Oleum Sulphuris		0	1	6
30. Oleum Salis Tartari		0	0	8
31. Syrupus Elaterii		0	0	6
32. Tabulæ Emeticæ		0	2	6
33. Sal Mirabile		0	6	0
34. Sal Vitriolatum		0	1	6
35. Aurum Vitæ		2	10	0
36. Calomelanos		0	2	0
37. Arcanum Corallinum		0	6	0
38. Pulvis Regalis		0	5	0
39. Pulvis Antifebriciticus		0	2	6
40. Pulvis Bezoarticus		0	10	0
41. Hercules noster		0	8	0
42. Antidotus nostra		0	1	0
43. Theriaca Londinensis nostra		0	4	0
44. Laudanum Volatile nostrum		0	16	0
45. Extractum Pectorale		0	0	6
46. Balsamum Sulphuris nostrum		0	2	6
47. Balsamum Amicum nostrum		0	1	0
48. Balsamum Arthriticum		0	1	0
49. Balsamum Ophthalmicum		0	2	0
50. Pilulæ Panchymagogæ		0	8	0
51. Pilulæ familias nostræ		0	5	0
52. Balsamum de Chili		0	1	0

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Adver-

A
COMPLETE SYSTEM
OF
PHYSICK

Theoretical and Practical.

BOOK IV.

Of Fevers.

CHAP. I.

Of Fevers in General.

§. I.

Almost all Mortal Men, in *Helmont's* Opinion, have been took away by the Cruelty of Fevers, either Simple, or Complicate and Malign. Therefore I believe that He was not much out of the Way who called Fevers, which at this Day destroy almost the third Part of Mankind, the most common and usual Disease. *Hippocrates*,

lib. de Flatibus, confirms the same to be true in his Time: And also *Helmont* in *Tr. de Febribus* num. 1. saying, *Altho a Fever be most familiar to us, yet it is it that chiefly fattens our Church-Yards, and lays Wast our Camps. Scarce any Man dies without a Fever*, cries the Poet, intimating, that it is the most General Distemper. And seeing, that besides Intermittent, Pestilential, and Spotted Fevers, others daily rage amongst us: for that Reason the credulous Ignorance

A a a

Ignorance

horance of the Romans thought that a Fever was a Goddess, and erected Temples to its Honour; as *Valerius Maximus* diſt. ſætorumq; memorab. Cap. V. does teſtifie; perhaps left it ſhould hurt them and afflict the Body. Surely no Goddess, but a Fury of the Microcoſm hath forced its way on every ſide through all Societies. This *Lernean Hydra* ſpares no Age, Country, or Sex, but is deſtructive and cruel to all. But Intermittents are more favourable, than thoſe that burn with conſtant Fires. For it is not ſo grievous to be tormented and tortured at certain Times, or every other Day, as to be continually and always ſo. But of all theſe we ſhall treat in Order.

§. 2.

A Fever, both amongſt the Latins and Greeks, ſeems to have took its Name from Heat. The Latins derive it from the Verb *Ferveo*, which is the ſame with *Ferveo*, to be hot. For it is a certain Heat or Efferveſcency, whereby the Body is in a Flame, or violently hot; although *Paracellſus*, lib. 1. *Param.* c. 6. Tom. 1. writes, That its Name is erroneouſly derived from *Heat*, for that it is a Sign of the Diſeaſe, not of the Matter or Cauſe. By the Greeks it is called πυρεſς, and οὗ πυρεſς, that is, from Fire, or Veſuvian Flames, fiery Heat and Burning. *Willis* ſays that a Fever has its Derivation from the Word *februum*, or Off-ſcouring, which comes from the Verb *ferveo*; for he ſays, this Word beſt fits every ſort of Fever, in that the Blood in this

Diſeaſe does ferment, and by its Heat, like new Wort that is a working, is purged from the Lees. Some will have it to be derived from *ferbeo*, *ferbis*, and by Tranſpoſition *febris*. Others by the Word *februum* (as may be ſeen in *Varro*) underſtand a Purgament or Filth. For thoſe expiatory Sacrifices which were offered for Purgation or Purification-Sake were called *februa*, as *Ovid*, l. 2. *Faſtorum*, ſings,

Februa Romani dixerunt piamina Patres.

From whence ſome Pretenders to Phyſick do barbarouſly call a Fever, *Sanguipurgium*, or a Purger of the Blood. The Ancients alſo gave it the Name of *Querquera*, according to *Lucilius* the Poet.

Querquera conſequitur febris, capitiſq; dolores.

It may alſo be called *Turbatio Sanguinis*, or a Troubling of the Blood, becauſe the Eſſence and Formal Cauſe of all Fevers, conſiſts in the diſordered Mixtion of the Blood. But I am unwilling to dwell ſo long upon Words, and prefer the Shell before the Kernel. For from theſe Etymologies idle Wits raiſe many Diſputes and Contentions. Thus the Latins have always derived a Fever from Heat. But the Germans, on the other Hand, call it a Shaking or Shivering.

For if a Fever does conſiſt in Heat alone, then Shaking Agues, which we obſerve to be very frequent, cannot be called Fevers. For Cold and Heat are not the Fever, but rather the Effect of it; as *Helmont* has very well obſerved, when

when he says, That Heat is only a Symptom of the Fever, not the Fever it self. But seeing that Names do not always declare the Nature of the Thing, we will not therefore insist any longer upon them.

Definition.

AS to the Definition of a Fever in General, the *Galeniſts* define it *A preternatural Heat of the whole Body, caused by the various Diſpoſition of the four Humours.* Or, which is the ſame thing, they deſcribe it, by a hot and dry Intemperature. Hence *Hippocrates*, towards the end of his Book *de Natura humana*, ſaies, That all Fevers ariſe from Choler; and many Chymiſts deduce them from Sulphur alone. Others, who think they have hit the Nail on the Head, define a Fever by a *preternatural Heat*.

By *Willis* and his Followers it is defined, *A Fermentation or Efferveſcency riſen in the Maſs of Blood.* And in his Treatiſe of Fevers, not far from the Beginning, he writes thus; "A Fever is a Fermentation or immoderate Efferveſcency brought upon the Blood" and Humours. So that according to this excellent Author, it conſiſts in a notable Efferveſcency of the Blood and Humours.

Helmont explains the Nature of a Fever by the Accention of the *Archeus*; and ſays, That it is an Impurity of one Part of the *Archeus*, which therefore is affected with Anger and Indignation and raiſes ſuch Motions.

But *Sylvius* deſcribes Fevers by a preternatural Efferveſcency happening in the *Duodenum* amongſt the

Juyces that meet together there, which Efferveſcency he does not deny to be afterwards augmented in the Heart.

Barbette will have it to conſiſt in the encreaſed Circulation of the Blood, and aſſerts, That it is a certain Alteration in the Blood, and eſpecially in its quickned Motion.

There are alſo *Others*, who think a Fever to conſiſt in the Coagulation and Stoppage of the Motion of the Blood.

Paracelſus with his Crew of Chymiſts ſay, That it conſiſts in the Burning of Sulphur and Nitre, or that it is an Univerſal Inflammation of the vital Balaſam, and Mercury. Whereupon ſome Chymiſts deny that it's Eſſence does conſiſt in a hot Intemperature, as an Accident, but rather in a certain Subſtance.

Others define it by an Ebullition of the Blood and Humours.

There are alſo ſome, who pretend that a Fever has its Original and Riſe from thoſe Globules, which were diſcovered in the Blood by *Mr. Lowenbæk*.

Many ſeek for the Cauſe in a vitious Acid coagulating the Blood, and fixing it in the Heart.

Others blame the Ataxy of the Animal Spirits, which in their Opinion, does occaſion this Diſeaſe.

From what has been ſaid it may appear how intricate and doubtful the true Cauſe and Eſſence of Fevers hath hitherto been. Inſomuch that it is known to few in what Place the febrile Matter does infallibly reſide, and in what Acid or Humour it doth preciſely conſiſt, as *Helmont* in his Tract of Fevers, not far from the Beginning, teſtifies: A Fever is a Diſeaſe that is known even from the very firſt Invaſion:

but as to it's Causes, Manner of producing, Place of its Abode or Remedies, Physicians are altogether in the dark.

But now to act our own part in this difficult Business; ~~and~~, with the *Criticism*, describe Fevers by a more or less disorder'd Mixtion of the Blood, with an Ataxy and Ex-candescence of the Animal Spirits, which according to the Diversity of incongruous Particles, that compose the Blood and circulating Humours, become of a various Nature and Disposition.

When therefore a certain Humor, endued with a fermentative Quality, quite contrary to the Motion and Mixtion of the Blood, is perpetually, from it's Store-House in which it is heaped up by little and little, carried to the Heart; or only before a total Apyrexia happens, and the former Portion of the febrile Matter not as yet altogether attenuated, nor subdued by the Blood, or thrust out of the Body, is carried to the bloody Mass with the other circulating Humors, and by irritating the little Fibres of the Heart, hastens the Disorder of the Animal Spirits; then it is that a *Continual Periodical* Fever is produced. But if the Blood upon some Occasion do ferment, and its Parts be so inordinately moved that it can scarce in many Days be reduced to its former orderly Motion, then by Reason of the confused Mixtion thereof, and the corrupt Tribe (as the Vulgar express it) of grievous Symptoms depending thereon, we say the Patient has got a *Continual* Fever. And in it consists the Essential Difference between *Continual* and *Intermittent* ones. That you may the better

imprint these Things in your Mind, you may take notice, That our Blood does so long retain a due and exact Mixtion, as those indefinite Parts that constitute it (perhaps such as Wine is compounded of) do so mutually touch one another, that the subtle Matter that fills up all the little Spaces can maintain a due Agitation of these Parts, and such as is agreeable to our Nature: but if a foreign æthereal Matter flow in, this Union is destroyed, and the Parts are all more or less as it were relaxed, and other Interstices and unusual Pores are formed amongst the fluid Parts. And from hence proceed so many Fevers and inordinate Motions and Fermentations of the Humors, and especially of the Blood. For by the active Corpuscles alone, Salt, Sulphur, and Spirit, the *Phænomena* of Fevers cannot be explained, because nothing is moved of it self, but has its Motion from something else. Therefore we affirm that the Motion of all the Particles that constitute the Blood, is from a most subtle æthereal Matter, which fill seven the least Intervals, and all the intelligible Pores, and exagitates the various Particles with various Motions. Furthermore, the Blood has this in common with Wine, that at some Times of the Year it is more exagitated than at others.

From what has been said it may easily be concluded, That the Essence and formal Cause of all Fevers does consist in the confused Mixtion of the Blood, and the Perturbation of the Animal Spirits thence proceeding. Yet every Thing which is mixt with the Blood, does not forthwith cause a Fever, but only that which is of a fermentative Nature,

Nature, that is, which disturbs the Mixtion of the Blood; of which more hereafter when we shall speak of the Cause.

§. 3.

THE Ancients affirm That there are divers Sorts of Fevers, some in the *Spirits*, some in the *Blood*, and lastly, some in the *Solid Parts*.

The first they call *Ephemeræ*'s or *Diaries*, that is, Fevers that continue but one Day: to the second they give the Name of *Putrid*; and the third they call *Hætic*; to which also they add the *Plague*, *malignant Fevers*, and some other Diseases of the whole Substance, as they call them.

But *Sylvius* not content with this Number, hath found out some more, to which he gives divers Names, as, when it is accompanied with a Vomiting, he calls it a *Vomitory* Fever; when it is occasion'd by often going to Stool, he calls it a *Cacatory* one, &c. but Entities are not to be multiplied without Necessity: for it is sufficient that all the Symptoms be observed, after which it is altogether unprofitable to make divers *Species* of them, since they all differ only gradually. They are therefore either *Intermittent* or *Continual*.

There are many and other Differences, which are, as it were, subordinate, as from the Time of the Invasion they are either *Vernal* or *Autumnal*, some are *Quotidian*, some *Tertian*, some *Quartan*, &c. others are *Benign*, others *Malign*. For according to the Diversity of the Nature of those acid febrile Particles which variously disturb

the Mixture of the Blood, divers Sorts of Fevers are produced.

How *Putrid* Fevers differ from *non-Putrid*, Authors have not explained. It is true indeed that they say that in the *Putrid* there is an unequal Pulse; but this is only because the Drops of Blood that enter the Heart, are not all alike badly mixt: which however makes nothing to the real difference of Fevers.

In Our Opinion Fevers only differ in Degrees, as the Blood is more or less disturbed; and hence the Cure it self differs according to the Degrees of efficacious Medicaments. They differ also as to the Proximate and Remote Cause; for some have their Rise from the corrupt and acid Chyle disordering the Blood; others immediately from the Air, &c. Again they differ as to their Symptoms, the Cure of which is to be attempted as Necessity urges. The sweetness which we have often observed in the Mouths of Febricittants, is an Argument that the Blood is not vitiated with any Thing that is acid or bitter. Wherefore it is none of the worst Signs.

§. 4. Part affected.

IT is a great controversy and very dubious what the *Subject* of a Fever is, whilst some, especially the Ancients, make the Branches of the *Vena Porta* to be the Fountain of it; others the greater and more principal Veins and Arteries of the Liver; some the greatest Vessels of the Blood, and those that are next the Heart; many others, both of the *Ancients* and *Moderns*, make that noble *Viscus* the Heart, as to its *Humors*, *Spirits*

rits and solid Parts, to be the only and true Subject of it; which they prove from this, Because the Action of the Heart, to wit, the Pulse, is hurt, which many in this Distemper reckon the only Sign of a Fever. *Sylvius* accuses the *Duodenum*. Others, especially *Hellmont*, blame the upper Orifice of the Stomach. Most Physicians make the less Principal Subject of Fevers to be the Mass of Blood, or rather, the whole Body; for such Heat as is produced by the Heart, such is received by the other Parts, which, like Subjects, undergo the same Fortune with their King. But the first Passages, as the Ventricle, Mesentery, *Pancreas*, and other Glandules, also the *Viscera* appointed to elaborate and perfect the Chyle, many of which, having their Tone relaxed, beget nothing but acid Crudities, are said to be the Subject of the Cause.

We in short, make the Subject of a Fever to be all the Parts and *Viscera*, wheresoever there are any small Pipes, and also the nervous or fibrous Thread which is obvious every where in the Body. Neither do we exempt the Head; nor the Sanguiferous and Lymphatick Vessels; nor the Chyliferous, in which often those acid and feculent Particles are wont to lurk; no, nor so much as even the cutaneous Glandules, because that savage and febrile Acid is also sometimes wont to lodge in these. That the *Serum* is often the Receptacle of this Acid, I was convinced by experience in my Eldest Son, who when he was five years of Age, having took a Dose of *Mercurius dulcis* for the Worms, was presently seized with a very great Salivation; which, af-

ter that I had given him Opiats, and especially *Tberiaca Caelestis*, immediately ceased, but he fell into a tertian Ague; then after Universals, giving him Anti-Febrificks the Fever withdrew, but the Salivation returned; a Month after I gave him Opiats again, and he fell a second Time into a Fever; then, laying aside Opiats, I made use of Purgers and Dryers, a Decoction of the Woods with their Essence, and so, God be praised, he was happily restored to his former Health. For the *Lympha* retained in the Body becomes acid, which afterwards being communicated to the Mass of Blood disorders it and makes it ferment.

§. 5. Diagnostick.

WE will here in few Words, give the *Signs* of a Fever in General, referring those, which discover a Fever in Special, or this, or that particular Fever, to another Place. But whatever Authors say of Cold and Shaking, they have left us no Marks whereby to know what *Species* a Fever is of, before that it hath made its period or Circuit of Intention and Remission.

A Preternatural frequent Pulse is accounted a Pathognomonick or inseparable Sign of a Fever; but I have observed the same also in other Diseases when there was no Fever. as in Faintings, Convulsions, Epilepsy, Jaundice, &c. and also the Pulse is always swift in Infants. After these the Physicians bring in great Weariness, Stretching, Yawning, Cold and Heat, Pain of the Head and Loins, Vomiting and Loss of Appetite, all which Signs may

may notwithstanding be observed in the Beginning of other Diseases, to wit, when the Animal Spirits do not irradiate the Parts as they ought; for from hence follow these above named Symptoms. But when a Physician hath observed the Type of a Fever accompanied with the fore said Symptoms, he may certainly know what particular Species it is of; Therefore he will do well to attend diligently to these Things, lest he undergo the Calumnies of the Vulgar. Altho these conjunct Signs do, for the most Part, one way or other shew, that there is a Fever; yet they do not discover of what Particular Sort it is. For the Heat in Fevers sometimes is excessive, in some 'tis mild according as the tremulous Motion of the little Fibres is more or less encreased by the fluid Particles. There is often a vehement Pain of the Head by reason of the great Disorder of the Blood, and the Abundance of rigid Particles, and a too great Fermentation. Also there is a great and frequent Pulse, because of the augmented Fermentation, and violent Influx of the Animal Spirits into the Heart.

§. 6. Cause.

ALL Physicians agree that a Fever has its proper Cause, but because most of them (without Envy be it spoken) are confused and obscure in the Business, it is manifest that it still lies buried in the dark.

The Ancients, especially they that are Defenders of the Galenical Putrefaction, explain these Fevers by the four Humors supposed to

exist in the Blood (in which, according to Hippocrates, there are a Thousand) which they say do putrefie in the larger Vessels, and that Phlegm putrefies every Day, yellow Cholera every third Day inclusively, and black Cholera every fourth Day. So likewise from these Humors they derive all putrid Fevers; for by the putrefying of these Humors, and the Vapors that exhale from them, they explain the Heat and Cold, yea all the Symptoms of Fevers. Thus the Humor putrefying in these Vessels, enflames the natural Heat of the Heart and turns it into a preternatural or fiery one; whether it be from something within the Body, as Obstructions, Putrefactions, Humors and hot Vapors sent to the Heart or something without the Body, as Heat, of the Air, Sun, &c. And thus do they define a Fever in General by a hot and dry Intemperature.

§. 7.

THE Chymical Paracelsists do contend that Fevers do not arise so much from the Humors, as nitro sulphureous Impurities; affirming that the Humors cannot be enflamed of themselves, but that whatever is enflamed is of the Nature of Sulphur. For Paracelsus himself doth attest, That the peccant Matter in Fevers is Sulphur and Salt-Petre. But in another Place, he says, That a Fever arises from the Obstructions of the Spirit of Life, and that the Cause of all Fevers is an Oppilation, which turns to Putrefaction. Therefore the followers of Paracelsus do explain the Causes of Fevers

(according to his Principles) by Sulphur, Mercury and Salt conglomerated here and there in the *Viscera*. Others elegantly deduce the Generation of them from vitriolated acid Salts, if they ferment with lixivious Salts and Sulphur: Like as when Oyl of Vitriol is mixed with Oyl of Turpentine, and when Nitre is mixt with Vitriol for the making of *Aqua fortis*, or when Water is poured upon quick Lime, or when *Aqua fortis* is poured upon Silver.

§. 8.

HELMONT ascribes the whole Work to the ferment of the Stomach corrupted and strayed out of its Precincts, and thereby irritating the *Archeus*; and saith, That the Matter does not fluctuate in the Blood, but sticks inwardly to the Vessels, and that the *Archeus* alone is the Cause of every Fever. For he saith, That the febrile *Blas* doth first raise a Coldness, and after that a Heat in the *Archeus*: for according to him, the *Archeus* will stir up febrile Shiverings, Colds and Heats, but not the peccant Matter. And for this Reason, as he says, *Tract. de Feb. c. 5. n. 4.* when a Bone is out of joint, forthwith the Patients Teeth chatter, and he is troubled with a Shivering. N. 14. he says, That the Gall does regularly change the Chyle of the Stomach from acid to salt, but that in Fevers it changes it preposterously into bitter. Also *cap. 10. n. 1.* he asserts, That Continual and Intermittent Fevers have one and the same Seat; and that the Difference does not rise from their changing

their Places, or from the Nature of their Lodgings, but only upon the Account of the Occasional Matter. Likewise also *Cap. 11. n. 8.* he says, The occasional Cause of Fevers, and the Matter is first. In the last Digestion of the Aliment, whilst that the solid Parts do assimilate the Nutriment into themselves out of the Blood, it happens very often that there are Alterations, and, as it were, preposterous Abortions. Therefore this degenerating Aliment, undergoing various incongruous Shapes, does also beget divers Fevers. The other occasional Cause of Fevers, according to him, is a Recrement or liquid Ordure, drawn by the Meseraic Veins out of the Extremities of the larger Intestines. If the Recrement be carried obliquely to another Place (which ought naturally to pass by Urin) it causes a continual Fever. But when the Aliment degenerates in the Passage of the last Digestion, for the most Part it is milder and insipid, and therefore causes Intermittents, which continue the longer according as the Matter of them is the more glutinous: But the Recrement is the fiercer, and therefore doth raise the more grievous continual Fevers, and which come the sooner to a Period. Or these two Excrements, or the two occasional Causes when they conspire together, do bring forth *Epiala's*, semi-tertians, Battard-Tertians, illegitimate and errattick Fevers. Therefore the Intermittent require stronger Incisers than the Continual do, because they have a more obstinate and more glutinous occasional Matter which grows inwardly to the Vessels. But if that Aliment

ment degenerate above the Liver, it raises various Apostems, but not primary Fevers; and because in an Inflammation the *Cruor*, or the Aliment of the solid Parts degenerates into *Pus*, it also necessarily brings a Fever. And after it is come to the Height the Trouble and Pain is the less, as in Continual Fevers, and then either a *Crisis* or Abscess is at Hand.

Therefore *Helmont*, as we have already said, asserts, That Fevers arise from a peccant Matter, which being once existent in the Body, the Spirit of the Members or *Archeus* doth enflame it self by its own Excandescence, and being too much elevated, is extremely troublesome. But he does not say that there is any Heat in the peccant Matter, because if there were, it would act more violently near at Hand than at a Distance; Nay, that a dead Carcass, in which does remain a putrid Matter that grows hot by putrefying, would be hot. This therefore only occasionally heats, after the Manner of a Thorn, which occasionally causes a Heat and Tumor: Not because the Thorn heats, but in that the Spirit of the Members, that is, the *Archeus*, doth enflame it self, in striving to expel the occasional Matter, as if it were a Thorn. Whoever takes this away, whether by hot Things or cold, he wholly roots out the disease, and thereby the raging of this Spirit is appeased.

Therefore a Fever, according to this Author, is, not barely the Violence of Heat, but the occasional Matter, at the Appulse of which, the *Archeus*, as if it were enraged, enflames it self. He says, That the Thorn has its Seat in the first Shops,

from the *Pylorus* through the *Duodenum*, and the manifold Vessels that are there, the Intestines and Veins of the Mesentery, the Spleen even to the Liver; But that the nearer to the Mouth of the Stomach these Annoyances are, they are the more troublesome, and that afterwards more grievous Accidents, as Thirst, Want of Appetite, Head-Ach, *Carus*, Watchings, Anxieties do ensue. Furthermore *Helmont* says, That a Fever is not only an expulsive or alterative Endeavour, but that it is a Part it self of the *Archeus* enraged at the Presence of the hated Enemy, which is the occasional Cause. Hence it is manifest that the Essence of all Fevers does consist in the Excandescence of the *Archeus*, and only differs as to the occasional Cause. In like manner the *Helmontians* say, That a Fever may also arise without an occasional Cause, as when the *Archeus* does grow turbulent on its own accord, and upon some small Error inwardly assumes to it self Species of Madness, and by this Means is disturbed, and sequestred from the remaining Part of the *Archeus*. They further add, That this however is for the most Part provoked by the occasional Cause, which is like a Thorn; by means of which the *Archeus* is moved by its own *Blas*, which it hath from the Soul; and this *Blas* sometimes is so elevated, that the *Archeus* seems to take Fire. Now, according to our Author, these Thorns are nothing else than corrosive sharp Salts, proceeding from Indigestions, by the Ministry of which the *Archeus* is easily enflamed, and it is caused as often as the Blood by volatilizing is not ventilated. Or also

also the occasional Cause doth arise from hence in that the Chyle by the Fault of the Stomach, is become acid, and being carried into the Veins of the Mesentery through the Error of the Duumvitate, does cause a Fever.

Now the Reason, as *Helmont* will have it, why there is a quick preternatural Pulse in Fevers, is not through any Necessity of cooling, or to expel the fuliginous Vapours, but because of a most swift Diffipation of Spirits; for by a more speedy Pulse the Restauration of the Spirits is hastened. What *Helmont* says of the Causes of the other Symptoms of Fevers, we will show afterwards when we treat designedly of their Symptoms.

§. 9.

THE famous *Boerhaave* (which Opinion *Boerhaave* also, and *Berger* are of) treads another Path, and saith, That a Fever doth consist in a notable *Effervescency of the Blood and Humors*. For he affirms, that the Blood in a Fever doth mightily and with great Violence boil: because every Febricitant (be he never so ignorant) complains of the Blood being affected, and of its fermentating in the Vessels, and as it were, running mad. Furthermore, he presupposes the Juice that irrigates the nervous parts and the Brain, to be transmitted out of the Blood into the Nervous Stock by an even motion and a certain Circulation, and from thence again to be refunded into the Blood: which Juice if it receive any Taint from the Blood, or is perverted in its Motion, is the Authour of Pains, Shakings, Convulsions, *Deliriums*,

Phrenzy, and of many Symptoms of the Nervous Kind. His opinion is that the Nutritious Juice or Chyme, is supplied out of the daily Food, is mixed with the Blood, becomes a perfect Humor, and is by it, whilst it circulates, assimilated into it self; at length, waxing old, is separated and set aside to the Nourishment of the Parts. So long, as these Mutations are rightly perform'd, he thinks that the Blood ferments as it ought to do: but if this Juice be not duely maturated by the Blood nor assimilated, but confused and remains in the Blood like some heterogeneous Thing; that then a febrile Ebullition happens, yet not always, but only then when the Blood is fully saturated. Now, he says, That this Juice is not corrupted by its own Fault, or of the *Viscera*, but by the Fault of the Blood; for that the Blood when rightly disposed does sanguifie, but if it do degenerate from its native and genuine Disposition into a sharp or austere one; that then also the Stock of the Nutritious Juice is perverted.

He does not compound the Blood of the four Humors of the *Dogmatists*, viz. the Blood strictly so called, *Phlegm*, and both the *Cholers*; but of the five Principles of the Chymists, *Spirits*, *Salt*, *Sulphur*, *Water* and *Earth*. But he thinks that *Phlegm* and both the *Cholers*, being Recrements of the Blood, are shut up in their proper Receptacles, or in the narrow Passages of the *Viscera*, and are not mixed with the Blood, and therefore cannot be the Cause of a Fever.

He also makes a two fold Fermentation in the Mass of Blood; one

one *Natural*, the other *Morbous*. He drives the *natural* from a double Cause, from the *Crafts* of the Blood it self, which consists in a due Proportion of Sulphur, Salt, and Spirit, and from *Hogelandus's* Ferment, or *Cartes's* Fire hid in the *focus* of the Heart, which in a Moment kindles the Blood that flows in thither. The *morbous* he places in the Disproportion of one or more of the Principles.

From the *morbous* fermentation he says, That Fevers have their Births, and according to the three-fold Degree, or Way of Fermentation in the Blood, he makes a threefold Difference of continual Fevers. For that either the Spirit alone, or also the sulphureous and oily Substance does ferment, or that the Blood is infected with a poisonous Miasm. From the first he derives an *Ephe-mera* of one or more Days, or a *Synochus*; from the second *putrid Fevers*; from the last, the *Pestilence*, *Malignant Fevers*, *Small Pox*, and *Meazles*.

This Author furthermore makes the natural Temperature to be exceeded by a third preternatural Way of Effervescency, wherein the Blood undergoes an alteration which never happens to Wine, but very often to Milk; to wit, sometimes this liquor is coagulated by the morbid Cause, so that its Substance is scattered and falls to pieces, and the thick and terrestrial Part is separated from the thin: by means of which the Blood does not well circulate in the Vessels, but some frozen Portions of it being apt to stagnate in the extreme Parts or in the Heart, do interrupt or mightily hinder the equal and even Motion to restore which greater

Effervescencies than usual are raised in the Blood; such as are wont to be in a Pleurisy, malignant Fevers, &c.

§. 10.

Splivus, from the various Causes of a preternatural quick Pulse acting variously, searches out various *Species* and Differences of Fevers: the Cause of which he makes the too great and permanent Rarefaction of the Blood; arising from a strong Fire, breaking forth by the Effervescency of both sorts of Blood.

He therefore blames every Thing that's sharp, sometimes an Acid, sometimes a lixivio-saline, sometimes a briny-saline driven through the Veins with the Blood to the Heart, and inwardly twitching its *Parenchyma*. Also every dry Flatulency, carried in like Manner with the Blood to the Heart, or raised by the Effervescency of the Blood in the Heart, and increasing the Dilatation of it's Ventricle. Also every thing that's sharp or hard in the *Pericardium* or elsewhere, and inwardly gnaws or pricks the Heart.

And to the causing of Fevers he thinks the *Succus Pancreaticus* does very much contribute, whilst some Part of it stagnates in one or more of the obstructed lateral *Ductu's*, and is made sharper by its long lying there; for by that acid Acrimony it forces it's Way through the more or less viscid *Pituita*, and whatever occasions that Obstruction; and being poured into the *tenue Intestinum*, and there mixing with *Choler* and *Phlegm* makes a vitious Fermentation.

tion. So that *Sylvius*, to be brief, will have the Cause to be, the *Succus Pancreaticus*, made somewhat sharper by reason of the Passages, that are stopped and a vicious Fermentation thence ensuing; which Acid, together with a predominant lixivial Salt conveyed to the Heart through the *Vene La-Hee*, he concludes to be the Cause of a preternatural Heat there.

A Physician of good Quality bears up against the Opinion which this Practitioner entertains of the Pulse, saying that the Quickness of it is no true sign of a Fever. (1) Because it is Notorious that the Pulse is very quick in the Cold Fit as well as in the Hot, and yet not one of the *Sylvians* will affirm that the Circulation is augmented in a Cold Fit. (2) And that we may more accurately understand this, let us consider what a Pulse is, and how it is made: A Pulse according to him is nothing else but a very quick or Convulsive Motion of the Heart & Arteries. Now the Heart is a Muscle, or rather made up of many Muscles which open and shut dilate and contract it. And he proves that the Opening or Constriction of the Heart, comes from the Influx or Afflux of the Blood, because so often as the Heart is contracted and freed from Blood, so often does it beat; for the Blood does not move the Heart, but the Heart receives and sends it out again, or rather discharges it self, just as Water is pumped out of a Pump. So that he reckons that a quick or slow Pulse comes from nothing else but the quicker or slower Motion of the Arteries, (which Arteries are so many Pipes and Channels that receive and drive

on the Blood, not by Means of the Blood it self, but the little Muscles, after the same Way that the Heart does) From whence he concludes, that the Heart and the Arteries may be quickly distended and contracted, tho the Blood be thin, hot, and in a very quick Motion; nay, tho it be gross, cold, and in a brisk Motion; for seeing the Heart can beat without Blood, it may also beat if the same Blood be thick. For the Pulsation of the Heart does not properly depend upon the Blood: nay, it is plain as he sayes, to any considerate Person, that the Blood which is thicker and slower mov'd, is the Cause of a quicker Pulse: The Reason is this, Blood which is gross and moves slowly, passes with great difficulty through the smallest Arteries into the Veins, so that the Heart, that it may discharge it self of the Blood, stagnating, as it were, in the Arteries, must beat very quick, that so what cannot by one, may be effected by frequent Pulsations. And he declares the Passage to be paradoxical, that is, That a quick Pulse in Fevers is not a Sign of an Augmentation of the Circulation and Effervescency of the Blood. And the same Author likewise says, That the Opinions of *Sylvius* and *de Graaf* about the Pestilence are invalid. For whereas *Sylvius* attributes the Cause to a sharp, piercing, Volatil Salt; the fore-said Author proves by these following Reasons, that it does not consist in any such Thing. (1) Because those Remedies which are prescribed in the Plague, for the most part consist of volatile Salt, as volatile Salt of Harts-horn, Vipers, &c. (2) Be-

(2) Because there is a great Resemblance betwixt that and those Diseases which arise from an Acid. And also because Oil of Vitriol, Salt and all Acids immediately infused into the Blood of any Creature cause the same Symptoms.

§. II.

OUR own Opinion is, That the Nature of a Fever consists in, may has it's Original from, some heterogeneous Particles mixt with the wholesome Mass of Blood, that have no proportion with it either in Figure or Motion. That is to say, that it is composed of such Pores, and indeed round *Globuli*, which leave interstices that are pervaded by a subtil Matter, which has no Commerce with that which runs through the good Mass of Blood. So that when any incongruous thing is intimately mixt with the Blood, then there happens an unusual Fermentation or Effervescence thereof, and thereby the Animal Spirits are disturbed and infested, whence proceeds their Ataxy or total disorders, and from hence several preternatural Symptoms, a very quick Pulse, a *Delirium*, phrenetic Convulsion, very often occurring in Fevers, may be derived. So that as often as the Exotick Particles of the Blood, such as are the Pointed, and those that have many Angles; as often, I say, and so long as these Particles predominate, and consequently raise a confused Motion; so often and so long the Fever rages in the Blood, and seizing upon the Heart and Brain does sometimes cause utter Ruin and Devastation there.

So that the Blood is so long kept

in an exact Mixture, as those indefinite Parts that compound it do mutually touch one another so close, as that the subtle Matter, filling up all the Intervals, is able to keep those Parts in their due Motion: But this Tie is dissolved whenever other spaces and unusual Pores are made amongst the fluid Parts, and from hence, in our Opinion, daily do proceed so many Fevers and inordinate Motions & Fermentations of the Humors. So that we do suppose the Essence and formal Reason of all Fevers to consist in the disturbed Mixtion of the Blood, and which proceeds from that, the disorder of the Spirits; tho every thing that is mixed with the Blood, cannot presently produce a Fever, but only that which is of a fermentative Quality; for thereby the Mixtion of the Blood is hindred, and consequently the Animal Spirits disordered; such as are Salts, Recrements, and disproportionate Particles; likewise disagreeable Sulphurs, the *Lympha*, or Chyle corrupted with an Acidity, and such like, and that which we call a febrile Ferment, which may easily be communicated to the Heart by the Lymphatick Vessels from all the Parts and *Viscera* of the Body, and in its most inward Recesses disturb the Mixtion of the Blood; as may be proved by Wounds, *Buboes*, and Ulcers. Yet we are of Opinion that a Fever proceeds commonly from the Non-naturals, as they call them; from the Air infected with disagreeable Corpuscles; from irregular Eating and Drinking, which supplies the Blood with nothing but vitious Chyle; by the Interruption of some usual Evacuation;

vacuation; or the Passions of the Mind.

But some Difficulties arise touching this Opinion, as (1) Whether certain Particles of the Blood are blended amongst one another in some certain Order, which upon the coming of the Fever are changed and confounded? (2) What the Effect of this confused, disorderly Mixture is, and in what Order those Particles are disposed in time of Health? (3) What it is that thus disorders the Mixture? (4) How the Blood thus troubled can cause a Fever? And (5) How from this *Hypothesis* an Account can be given of the *Phænomena*, and Symptoms of Fevers? So that we are to shew first the certain Order of the Mixture of the Particles in the Blood; then How they are disturbed; and lastly How a Fever comes from this Disturbance. We must therefore observe, that the Order and Harmony of the Particles in the Blood, consists in their due Motion, Figure, Magnitude and Situation; for they are in no Confusion, but have a proportionate Mixture whilst in a Natural State; which is disordered by a supervening Miasm, or a febrile Ferment: And this does not Consist in the sensible Particles, as may happen in any Indisposition and Caco-chymy, but in the insensible. Now the Effect of this Mixture is this; That the proportionate Fermentative and Vital Motion of the Blood may be preserved, and all the vital Actions commodiously performed. The natural Order of the Particles is such, that there is no Appearance of any that are either Acid, saline, bitter, watry, or viscous, &c. which *Hippocrates* long since

taught; but all of them ought to be so tempered together, as to conspire in one and the same Motion.

Now that disturbs the Mixture of the Blood which brings in another æthelial Matter that proves the Author of another Motion: that is, the Pores of the Ferment do not in every Respect answer the Pores of the Particles that constitute the Blood, so that there arises a Confused Mixture in the Heart, where it ought to be most exact; and in this consists the essential Cause of a Fever, and not in the Blood troubled or disturbed. It is therefore clearer than the Sun at Noon day, that all the Symptoms of Fevers, allowing this to be the formal Cause of them, may be very easily explained, as we see daily in the Modern Schools. Of all which we will be more large when we come to treat of Fevers in particular.

§. 12. Prognostick.

THE greater or less the Disorder of the Blood is, the more or less dangerous is the Fever. Those who are fat are not so apt to have Fevers as those that are lean.

Muddy Urine without any Sediment, is a great Sign of the Disorder and Confusion of the Humors; the sooner that it abates of it's Colour, and the Sediment being of a good Consistency, settles of it's own Accord; by so much the shorter will the Fever be, and it is a Sign of a good *Crisis*; for the redder and thinner it is, so much the Worse.

A weak Pulse presages a doubtful Event; an Intermitting one, except

except at the same time very weak, is not always mortal.

A good Pulse, that is, a great and equal one, though accompanied with bad and grievous Symptoms, is Better and Safer than a weak Pulse with those that are milder, for this often proves Mortal.

Autumnal Fevers are more dangerous, and attended with worse Symptoms than the Vernal, the Blood in Autumn being deprived of its Spirits.

§. 13. Dietetic Cure.

Seeing the whole Business of Physick is to conquer the Disease, and cure the Patient as far as is possible, and as *Hippocrates* says, not only to keep him in Health, when he is well, but also to prop him up, when he is like to fall, and when he is fallen to rear him up again. It is of great Moment to learn the General Curative Indications of Fevers, according to the Constitution of the Etymology, Definition, Subject, Differences, Signs, and Causes, which we have hitherto, but slightly mentioned.

And first, that we may be Methodical concerning Diet in Fevers *Hippocrates* writes well l. 1. *Aphor.*

1. That not only the Physician, but the By-standers, and the Patient himself must bear a part, or else no Remedies can be administered, if either the Attendants, when the Physician has prescribed a good Thing, omit to give it, or give it him unseasonably, or do something about him without the Physicians Advice, which may afterward prove hurtful to him; for poor sorry Women which sit by, or wait on the Patient, both Kin-

dred and Friends that come a visiting, are wont to force much meat upon him to his utter Ruin, and this too, as the tatling Fools pretend, to keep up his Strength.

Now the main Business of the *fix Non-naturals* regards the Patient's strength, his Cure only by Accident. Therefore first of all the Air is to be considered, from which a Fever generally has its Original, especially if it be infected with exotick Corpufcles. Let that which is pure, serene, and temperate, be chosen; if that which is naturally so cannot be had, it must then be made such by Art. That which is too hot, is to be avoided, and also that which is too cold, because it shuts up the Pores: So long has this opening and shutting of the intercutaneous Passages been observed by Physicians, that *Galen* in his time did not reckon it to be the least Cause of Fevers.

As to Meat in this Case it consists in Quantity, Quality, and the Way of taking it.

And first for the Quantity, We must consider that those, who are apt to have Fevers, have always some hidden Morbific Causes within them, which easily hasten a confused Mixture of the Blood; Therefore the feverish Matter is only augmented by much eating, nay, the Chyle becomes more viscid, gross and acid, which if it gets into the Mass of Blood, an intermitting Fever must necessarily follow; so true is that Saying of *Hippocrates*, 2. *Aphor.* 10. *The more you feed impure Bodies, the more hurt you do them.*

Therefore they who humor Feverish Persons in this Point, do not at all consult the Patient's good; nay,

may, run him into a manifest Mischief; for the Stomach of Febricitants, by reason of the Stupidity of the Faculty in the *Viscera*, and the nervous little Fibres kept in continual Motion, and made more lank by much Drinking, is very faint, and the Chylification, through much Eating, is rather hurt and its Fermentation spoiled, and by that means breeds Fuel for the Fever. And for this reason *Hippocrates*, 7. *Aph.* 65. says, The meat which is given to one in a Fever; as when he is well it is a Strengthening to him, so here it is an Increase to his Disease. So that in the most acute Fevers which have commonly their *Crises* the first four Daies, they must use a very slender Diet. In acute Fevers such a slender Diet is not altogether required: And here ought to be considered, the Climate, Season of the Year, Age, the Diversity of the Fever; as to which this or that thing is, or is not Expedient, according to *Aphor.* 11. §. 4.

As to the *Quality* of the Meat, *Hippocrates* advises the Patient to Soups rather than solid Meats. For such Diet is more agreeable to Nature, which is sooner refreshed by these, and not taken off from the War, which it has undertaken against the Disease. And it is easier, says *Hippocrates*, *Aphor.* 9. §. 2. to be refreshed with Drink than Meat.

As to the *Manner of taking* Meats, we are here to know that the Patient must not eat at all in the Accessions of Fevers, in which thing there is a great Error in this Age, as we have already said, when most Physicians allow their Patients Meat without observing

Difference of Time. For Nature whilst in the Accession it is striving against the Disease, is not so intent upon providing of Aliment. So that the Meat not being fermented, aggravates the Fever and its Symptoms. And *Hippocrates* l. 10. *de Acutis*, also tells us what Inconveniencies happen upon the unreasonable giving of Meat. Tho there are some Cholerick, Hot, Sulphureous Bodies of a most exquisite Sense, who, being used to great Toil, and to feed heartily, if they do not eat in the Beginning of the Fit, fall into a *Syncope*, *Marasmus*, &c. which *Galen* tells us of, 10. *Meth.* Cap. 3. speaking of a Youth, who, having a Tertian Ague in the Summer time, if he did not eat when the Fit was coming, fainted away. But one Swallow does not make a Spring: however I think we should allow something to Custom. But many politick Physicians think they have no more to do, than to please the People and seem to be careful of the Patient's Strength; whose preservation I would have them know, does not depend on Words, but a proper Administration of Remedies. But the World loves to be impos'd upon. In like manner, as I do not like too severe Physicians, so those are still worse that are too favourable for Conscience sake, as *Asclepiades* at Rome; who allowed his Patients Baths, Wine, Flesh, and whatever they longed for, or was grateful to them; by that means cunningly Winning the Hearts of the Romans, no doubt, not without the manifest Injury and Death of many. But enough of this.

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As to *Rest and Exercise*. Immoderate Motion is oftentimes hurtful, and may cause a Fever; because by that Means the febrile Particles that lie lurking in the little Passages are mightily forced out, which communicated to the Mass of Blood, are apt to disturb it and produce a Fever. And likewise too much rest is ill, because by that means the Particles through too great rest and Vacation contract a Malignancy, which afterwards through their superabundance swell and disorder the Blood; therefore the Golden Mean is the Best.

The same Measures are to be taken in *Sleeping and Waking*.

The *Mind* ought to be free from Cares, fright and Grief; for by these you may quickly hasten a Fever, nay Death it self.

Take Care that *Evacuations and Retentions* be according to Nature.

§. 14. Cure.

WE come now to the *Cure*, and first according to the Opinion of the *Ancients*: We must observe in general, that every thing which is Preternatural does indicate a Removal thereof, as *Galen* teaches, *l. 8. Meth. Med. c. 1.* So that if a Fever, according to the *Dogmatists*, is bred of Heat and Dryness, we must in the Cure have recourse in the first place to Cooling and Moistening Things; for which Reason *Galen, lib. 9. Meth. Med. c. 14.* says, every Fever, as such, is Cured by Moistening and Cooling Remedies; which *Hippocrates* confirms, *lib. 1. Aph. 16.* And they usually cure Fevers

by Venesection, Purgings, Clysters, according to that of Monsieur *Mollier* the French man,

Clysterium donare, postea Purgare, venum secare, &c.

For they endeavour to carry off the Putrid Humors, which breed that preternatural Heat in Fevers. Their other prescriptions are either things Cold or Moist, as several Alterers, yea and they prescribe variously, according to the different Symptoms. Others of them, as *Avicen*, after they have opened a Vein in Fevers, are of Opinion, that the Belly ought to be loosened with *Manna*. Others order first a Purge, and then to breathe a Vein: For this is their main Drift in Curing, to root out the Mine of the Disease, which they say is in the Humors, and so clearly to extirpate the Febrile Matter out of the Body, that there be no Remainder of it left, or any fear of a Relapse; for which Reason they ply the Patient with Catharticks, Vomitories, and also Venesection, for that is *Galen's* Opinion, *9. Meth. c. 5. de Sang. Miss. 20.* If a Crudity, either of Meats in the Stomach, or Excrements in the Intestines did precede, that Bleeding should be deferred so long as shall be thought sufficient for the Concoction of the Meat and Descent of the Excrements. Therefore several of the Ancients before they breathe a Vein, if they think the Stomach and Intestines be stuffed with Excrements, do usually, according to *Galen's* Advice, defer the Remedy for a short Time, and in the mean while Exonerate the Body with some Lenitive Medicines;

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cines; provided the Disease will admit of so long delay, and that there be no danger in such an Omission. But if it prove otherwise, and the Disease be so violent, that it will not admit of Delay, then having first given a Clyster, they presently fall to Venesection, after that, if there be occasion, they forthwith give loosning Medicaments. *Avicen*, after Venesection, as we said before, advises the Belly to be moved with such things as these Barly-water, and a little *Manna*; who on this occasion prescribes three Medicines; the first is made of Barly-water or Ptisan, which, according to *Galen*, 1. *de Rat. Vict.* 18. does gently loosen; and *Manna* which also was not unknown to *Galen*, and which, 3. *de Alim. Facul. Cap. de Melle.* he calls Acreal Honey. The other Remedies for Fevers prescribed by the Galenists, are Distill'd Waters, Cordials, altering Broths, with Cream of Tartar, which dissolve the *Mucus* in the Stomach. Their other Remedies in this Distemper we shall particularly speak to afterwards.

§. 15.

Paracelsus, who, contrary to the opinion of the Galenists, is against Blood-letting, says, Take this brief Account of Fevers; First of all, let there be a Febrile Purgation, then a Specifick Cure, and a Causal Diminution, so as that a Mercurial Vomit precede the second Medicament. For by this Purgation all the Fever is expelled in the Peccant Matter; besides, if the Disease be not prolonged, neither Cure nor Diminution is necessary. For a Mercurial Vomit ma-

ny times works a perfect Cure. But if it be spread into the Members, his *Laudanum* presently follows, which expells the Fever, and also the Dilatation. But an Evacuation, whether by the *Salvatella*, or *Cephalica*, or that which is usually done by the Spine of the Back, removes the Peccant Matter in the Blood, and that between the Flesh and the Skin. So that in this place there are three things which do the same thing in a Cure, all of them perfect in themselves. Lastly, that the Physician may not Prescribe more or less than is fit, he must carefully observe, what is, and what is not dilated. And he saies in another place, Essences also, Extractions and Magisteries of the greater Medicines, restore the Body, and set the Patient on his Legs again; he Cures Quotidians, Quartans, Continuals, and Diaries, and he thinks there are above two hundred several sorts of Fevers.

He makes the Cure of Fevers in the Stomach Two-fold, C. 3. Tr. 1. lib. 2. *de Tart.* therefore Purgation is to be used without Digestion, and *Laudanum* Pills, according to him, are to be given before the Fit: For he would have all Medicaments in Fevers to be given before the Fit, that they may Operate together with it. Every thing that Evacuates should be order'd so as to work both upward and downward. In this Purgations with a Vomit should be an *Arcanum* and not Galenical. For Tartar it self is a Specifick Subject in the *Arcana*, as are Centory, Hellebore, Spurge, Colocynthus, &c. In the same place, Chap. 7. he Describes some Pills. He makes a Three-fold Cure for Fevers of the Liver; Decopila-

tion, Mundification, and Inſtigation. For Fevers in the Reins he commends *Alcali* of Shells, Cryſtal, Mummy, &c. Sweet-oyl of Sulphur, of Vitriol; and in other places he commends Opiates. And his Chymical Followers mention a thouſand things more; ſome of which we ſhall ſpeak of when we give our own Opinion.

§. 16.

Helmont has one Cure for all Fevers, but diſcommends Bleeding, which is the only Remedy that the Galeniſts uſe in this Diſtemper, and brings an Example of one who was Blooded ſo often, that when he was open'd, not a drop of Blood was found in his Body, and yet the Fever did not abate to the very laſt, but rather kept its Circuit of Intention and Remiſſion. And this Author further adds, that Bleeding ſteals away the Spirits, ſo that the Strength is not ſo ſoon repair'd, and the *Criſis* is put by, and that if the Patient do grow well, it is not till of a long time, and with ſome fear of a Relapſe; but they are eaſily recovered without Bleeding. *Helmont* farther ſaies, That by Venefection a Paſſage is rather open'd for Corruption to flow to the Heart, than prevented by it. Beſides, he ſaies it is a Ridiculous thing to think that Venefection can cauſe Revulſion; becauſe the Febrile Matter does not Fluctuate in the Veins, but ſticks to the inſide of the Veſſel, ſo that it ſeparates nothing that is to be ſeparated, becauſe it Acts without fore-knowledge of the End; and that which is the neareſt goes out firſt, which is followed by the next

to that, for fear of a *Vacuum*; and by this means the Terms alſo are ſtopt, which makes *Helmont* brag, he can Cure all Fevers without it. Beſides, the Turks and other People are Reſcued from Fevers, who yet know nothing of Venefection. Both *Helmont* and *Paracellus* extol their *Arcana's*, which, as they brag, never failed them. For, they ſay, they have Cured all Fevers with one ſingle Doſe of *Mercurius Diaphoreticus*, and an Hæctic in a Months time, and a Quartan with one Draught of their *Arcanum Coralinum*. For in *Helmont's* way of Curing Fevers, the occaſional cauſe is not only to be conſidered, but the Dignity and Perturbation of the *Archæus*; and thoſe things which offend Materially, are eaſily forced by Nature, the Confuſion of the *Archæus* ceaſing, as ſoon as they are reached by the *Arcanum*.

This Author Brags, he has Cur'd Fevers without Blood-letting, and that he allow'd his Patients Wine; Nay, he ſays, that Perſon does not deſerve the Name of a Phyſician, that cannot Cure a Fever within the ſpace of four Days; and this is that Sudoriferous Medicine, viz. *Mercurius Diaphoreticus* which Cuts, Attenuates, Reſolves, and Grinds off the occaſional cauſe wherever it be, which it often effects without Sweating. Yet, he ſaies, that particular Remedies which do not come up to an Univerſal Amplitude, are Salts of Cephalick Things, as Marjoram, and Roſemary; but they muſt be Volatile Salts, not *Alcali's*, and they muſt contain in them the *Criſis* of the Simples, ſuch as Temper'd Diureticks, which ſhould always be given upon an empty Stomach, and

before the Fit in Intermitting Fevers, and in Continual at any time. *Helmont* orders the Patient Beer Coloured with Wine, and a Crust of Bread, not so much for Nourishment as Humectation. He is against Cordials of Alkermes, Pearls, and Gold, because neither Gold nor Gems do inwardly refresh Nature, in that they do not Symbolize with our Spirits, which *Petronius de Victu Rom. c. 4.* does confirm. But the only Intention of this Author is to Cure a Fever by Sweating; for the *Archæus* commonly Enflames it self by its own Exandescence, and pours forth a Hot Sweat, shewing the Physician the way how to Expel that Feverish Heat, viz. by Diaphoreticks, which are the only Appropriate and Specifick Remedy in Fevers.

§. 17.

AS to what concerns *Willis* his way of Curing Fevers, especially Intermitents, he has these following Intentions: First, To restore the Blood to its Natural Temper. Secondly, To prevent (as much as may be) the Depravation of the *Succus Nutritius*. Thirdly, To hinder a Feverish Fermentation, for fear a Fit be caused. And he thinks that in the Cure of this Deftemper, more is to be Attributed to Nature, and an orderly Diet, than to Physick.

To satisfy the first Intention he commends Vomitories, Venesection, and Purgation, which are to be Celebrated and Administred in the beginning of the Disease; but afterwards to be omitted as doing little Good, Nay, that they often do Hurt; it being a thing Notorious,

that a Tertian Ague is seldom or never at all Cur'd by these Remedies; when used too late, and that thereby it often turns to a Quotidian, And this Author knew some in perfect Health, who by taking a strong Emetick for Prevention in the Spring time, and causing a violent Evacuation, have fall'n presently into a Tertian Ague: Others he has known to have suffered a Relapse, because the Morbifick Matter which lay asleep, was by Purgers rowed up again: And therefore he prefers gentle before strong Catharticks. He says, Vomitories do great good both by Evacuating the Stomach, that Concoction may the better be performed, and that thereby the *Chymus Nutritius*, of which the Blood is to be made, may be more pure; and especially because they empty the Gall-Bladder by Copiously forcing Choler out of the *Meatus Choleodocus*, that thereby it being more plentifully drawn out of the Mass of Blood, it may be Purged of its Saline Recrements and Aduft Sulphur. Of Venesection he says, that it Cools and Fans the Blood, and hinders it from being too Hot, and as it were Roasted, and makes it more freely, without danger of Aduftion, Circulate in its Vessels. He says, That a Purge Evacuates, and by Irritating forces Choler out of the *Vasa Fellea*, and consequently out of the Mass of Blood. To this end he also reckons Digestive sharp tempering things (to Wit, to reduce the Blood) for they fuse and alter it, and temper its Heat. This Author also tells us, that sometimes the change of Soil and Air do Notably correct the bad Constitution of the Blood, better than any other Rich Medicines.

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His Second Intention consists in Exactness of Diet, which in Fevers ought to be light and sparing; so that we commonly say, *Hunger is the best Remedy against a Fever*. And it is an Experienced thing, that the Fit is very often delayed, Nay, quite driven away through Abstemiousness and Fasting. For which Reason our Author advises a slender Diet, forbids the use of Sulphureous or Spirituous things, that so the Heat of the Blood may be abated. Also he would have no Meat to be given when the Fit is coming; for that it is both gentler, and is easier, nay, sooner Terminated when the Patient is Fasting.

His Third Intention which is to hinder the Fit, is performed by those Remedies which stop the Fermentation of the Blood. And they are then chiefly to be used, and do most good, when other Medicines, and Venesection have been premised; of which more hereafter.

§. 18.

Splutus makes the cause of Intermittent Fevers to be the Pancreatick Juice, which by Reason of Coagulated Phlegm, obstructing the lateral *Ductus*'s of the *Pancreas* being Stagnated, becomes more Acid and Sharp; and making its way through this obstructing Phlegm, into the *Tenue Intestinum*, and there meeting with *Choler* and *Pituita Intestinalis*, raises a vitious Fermentation: Afterwards stealing along with them, some way or other, into the Right Ventricle of the Heart, and irritating it by their Acrimony and Flatulency, cause there not only a more frequent Pulse, but over and above, several

ways alter and disturb the Vital Effervescency, and the Sanguification on it self. The Cure, according to this Author, is to be Effected, First by cutting and dissolving the more or less glutinous and coagulated obstructing Phlegm; which Vitious Matter must be remov'd from that place, and carri'd at least as far as the *Tenue Intestinum*, or else wholly Excluded the Body. Secondly by Tempering and Correcting the Acidity and Copious Acrimony of the *Succus Pancreaticus*. Thirdly, by preventing or amending the Vitious Effervescency.

This Author is of Opinion, that the obstructing Phlegm may be best cut and dissolved by Medicines Impregnated with Aromaticks and Volatil Salt, but with this Caution, that the whole Body be kept warm, either with Exercise, Fire, Baths, or Coverings, that the Virtue of the Medicine being every way dispersed may also reach the *Pancreas* it self, and its lateral *Ductus*'s, which are the place affected, and the Fund of the Disease. And he commends them most especially for Melancholy and Phlegmatick Persons. To this end he advises about three Spoonfuls of the following Mixture to be taken about two Hours before the Fit, and the Body to be well cover'd.

Take of Water of Parsly two Ounces, Fennel one Ounce, *Theriacalis Simplex* an Ounce and an half, Volatil Salt of Amber a Scruple, Syrup of *Cardus Benedictus* an Ounce. Mix them.

But as often as the Nature or Preternatural Constitution of the Patient is observed to be Bilious, he

uses Loosners, and inciding Acids.
V. G.

Take of Water of Fumitory three Ounces, *Sal Armoniac*, or Tartar Vitriolated one Drachm, *Antimonium Diaphoreticum* half a Drachm, Syrup of Fennel one Ounce. Mix them.

When a great many Phlegmatick, Gross and Bilious Humours abound all at once in the Patient, let him Drink a Mixture of the two Sub-contraries just now commended.

Take Water of *Cardus Benedictus*, Succory of each an Ounce and an half, *Theriacalis Simplex*, Destill'd Vinegar of each Six Drachms, Crabs-eyes Pulveriz'd half a Drachm, Syrups of the Five Roots an Ounce. Mix them, and give a Glas of them.

If the obstructing Phlegm be not very Glutinous, he affirms it may be dispers'd by one Sweat, and thereby the Fever cured.

When he meets with a Body full of Choler, but not much Phlegm, He gives a Vomit, three or four Hours before the Fit come, by the Help of which, not only the Superfluous Choler, (according to our Author) but also the obstructing Phlegm is forced into the *Tenue Intestinum*, from thence into the Stomach, and so through the Gullet, and out at the Mouth. To which end he does often with good Success administer a Vomitory *Sapa* prepared of *Virum Antimonii*. Purgers by Stool have, he says, the same Effect, provided those things

be mixt with them, which also incide and carry off that Glutinous Phlegm. E. G.

Take of *Pil. Eetide Maj.* half a Scruple, Trochiscs of Alhandal, *Mercurius Dulcis* of each five Grains, Oyl of Amber two Drops. Mix them and make six Pills, which he would have taken four or five Hours before the Fit comes, and the Body gently moved.

The great Acidity and Acrimony of the *Succus Pancreaticus*, which contributes much towards the causing a Fever, must be Tempered, according to this Author, by Volatil Salts, and all Aromaticks, not omitting Opiates. In like manner the Vicious Effervescency of that *Succus Pancreaticus*, and Choler must be hinder'd and corrected, as was shown before.

§. 19.

LET us now give our own and the Cartesian Opinion. We do believe that Fevers may be Cured by the Excussio and Suppression of the *Salino-Sulphureous* and Exotick Particles, by correcting the Viscidity or Acidity of the Chyle, or by setting to rights the disorder'd Mixture, and by composing the Spirits, and mitigating the pressing Symptoms.

As to the first Indication; that is, That those Feverish Particles may be excus'd; The Galenists cry up Blood-letting as the most Sovereign Remedy; because their Master Galen teaches, *lib. 2. Method. Med. Cap. 15.* that Bleeding is very wholesome in all Fevers arising from

from a putrifying Humour, not only in the Continual ones, but also in others. And though *Asclepiades*, *Chrysippus*, *Onsadius*, *Erastistratus*, and *Aristogones*, all famous Physicians, and *Helmont*, in our time, never breathed a Vein in any Distemper; yet others, as the Galenists, whom the French generally follow, are so free that way, that they seldom omit it in any Distemper.

We know by Experience that Bleeding in Fevers (because it does the more disturb the Blood) has often been very hurtful. Nay, when to prevent Diseases, it has been too frequently used, that it has made way for Fevers: Yet we are not ignorant that by letting Blood once before the Fit, the Fever has often at that very Instant been removed. Therefore it is our Opinion that these following Rules ought to be observed. Venesection signifies nothing where those Febrile Particles do stick closely to the Pipes, and are already mix'd with the Chyle, and whole Mass of Blood; for by this means the Blood is so exhausted, that the rest of the Mass is not sufficient to drive those Particles out of the Body. But it is proper when the Particles are only Lodg'd in the Mass of Blood, or the *Lympha*; for then they may easily be carry'd off with the Blood, which being once gone, those few that are left behind may with less Difficulty be overcome; and so the Distemper struck down at one Blow. Therefore in Putrid Fevers, a Vein is to be opened at the very first beginning, and before those Febrile Particles are fixed in the Pipes. Which *Hippocrates lib. 11. Aph. 29.* also affirms. If any thing

be to be moved, do it in the beginning of the Disease, especially in those who abound with *Serum*. In Continual and Symptomatick Fevers, Blood-letting, as occasion requires, is far more proper than in Intermittents. For it is certain by Experience, that being unseasonably used, it has for the most part chang'd a simple Tertian, into a double one. It is much better for those who are strong, to let it alone, but always Circumstances of Age, Climate, sort of Fever, (we think it is best to omit Bleeding in Malignant Fevers speaking here only of Putrids and Intermittents) Country, and time of Year, ought to be considered; for it is so improper in Autumn, and in the Spring-time, when the Fit is present, that the Physician had as good stab the Patient as Bleed him then. Sometimes the Blood, when it is let out, appears like Black, Livid, Green, &c. Gore. But these Accidents, according to *Helmont*, are not Signs of Corruption, but only of an Effervescency and fermentable Disorder.

The same is to be observed of Purging Medicines, which are either to be given in the Beginning, or else quite omitted; and all strong Purgers are hurtful. Besides, they do rather cure a Cacochymy than a Fever. For I have observ'd, with the excellent *Willis*, That a Tertian Ague is seldom or scarce ever Cur'd by Purgers that are given late, and that it often turns to a Quotidian. I have likewise, as *Willis* has done, known some that were in good Health, by taking an Emetick for Prevention sake, fall presently into a Fever, by reason of the *Serum* being exhausted; and I have seen others who by Emeticks

have been quite spent and Emaciated, and some others are observed to have thereby been Cur'd of a Fever, so that we must use them Cautiously; and a gentle Purge is better in the beginning and end, than one in the height of the Disease, tho it be strong. An Infusion of *Senna* with *Rhubarb*, *Yellow Saunders*, with *Salt of Worm-wood*, and some bitter Syrup may be given. *Tamarinds*, because they are somewhat Acid, are Extraordinary good in Fevers; especially if there be a *Choleric* Temperature.

Take of *Extractum Catholicon* fifteen or twenty Grains; and if *Phlegm* abound, two or three Grains of *Trochiscs of Alban-dal* may be added. *Tartar Vitriolated*, and *Cream of Tartar* alone often do the Work.

If the Purge does not leave working, but more Stools are expected, the Patient must not have any other Medicine. For they do madly, who one and the same Day both Purge and Sweat.

But Purging is altogether improper in Fevers, except there be a *Cachymy*; for the Disturb'd Mixture of the Blood is not regulated thereby; whether it be Requisite or not, the Physician may in some sort guess by the loss of Appetite, Vomiting, &c. for that is usually a Sign that the Stomach is Clogg'd with ill Humours, which should first be Evacuated; for else, if a Sudorifick should be administered when the Stomach is thus Burthened, the Medicine could not be able to pass, and so a Vomiting would be provok'd; and for this Reason Antispasmodic Vomitories given in the be-

ginning are the best; for often-times the Vicious Chyle is carry'd off by this only Remedy.

The main business of the Cure of a Fever lies in this; To remove the Obstruction of the Pipes, in which those Particles lie, which being made Acid by staying there so long, do in time cause a Fever; and also, to take away the Viscidity or Acidity of the Chyle, especially in Intermittents, and to assuage the Fury of the Spirits. It is also a common Rule with us, That cold things are never to be given in Fevers, because they obstruct; but we give Coolers, as *Lapis Prunella*, and *Camphore*; for these do not obstruct, but rather open Obstructions. Therefore let such Sudorificks be given as may remove Obstructions, Precipitate the Febrile Ferment, soak up the Acidity of the Chyle, and easily Extinguish it against the following Fit. For hereby those Acid Particles may not only be Corrected, but discharg'd through the Pores of the Skin: for the Pores and little Pipes of the Glandules being opened by Reason of the Relaxation of the Nervous Intercutaneous Fibres, and the Skin being thereby made more or less soft, rare, or vaporous, the Sweat may be transcolated as it were through a Streiner. But all the Sudorificks which are used in Fevers, are too many to be reckon'd up. Some commend fix'd Salts, others Volatil, some *Alkali's*, and others Essential Salts.

Sometimes they successfully give in Fevers Diureticks, or things that provoke Urine, especially in Intermittent Fevers, that is, if the constitution be such, as no great Quantity and Toughness of Humour lie in the way: yet however the more temperate

temperate and gentle ones are to be made choice of, such as can open the Passages, and Obstructions of the little Pipes, and expel the Febrile Particles; as, of the five opening Roots, *Asparagus*, Saxifrage, Restharrow, Madder, Goosegrafs, which are specifically available. The Herbs Millefoil, Saxifrage, Sothernwood, Agrimony, Seeds of Wild Carrots, Fennel, Berries of Juniper, Bay, *Sal Prunelle*, Spirit of Salt, Vitriol, Sulphur, Tartar, Oyl of Juniper, &c. And we must take notice that all Medicines in all Intermitting Fevers, must be taken about an Hour before the Fit; to the end that the Febrile Matter may be with-drawn from the approaching Exacerbation, and the Cause be intercepted. For they then alter the Blood, when those Acid Particles, forc'd out of the Pipes, or the bad Chyle, are already got to the Blood; for else, if they be taken before, they do not correct the Chyle, but only alter the good Blood, and never reach the cause of the Disease; so that Time and other Circumstances must carefully be observed in giving Febrifuges, or else we lose our Labour. But when there is a Crisis by Vomit, Siege, or Hæmorrhage, Sudorificks must for that time be forborn, lest Nature be disturb'd in her Operation. Now all Sudorificks are Sharp and Acute, which are able not only to correct those Acid Feverish Particles, but force them out of those little Pipes by removing the obstructing Phlegm. Therefore commonly these things that follow are convenient; Salts of *Carduus Benedictus*, Centory the less, Wormwood, Silver-weed, (which I reckon a Specifick) Fumitory, *Scordium*, Tama-

risk, *Diascordium*, Rob of Elder, Bark of Peru, Trochiscs of Vipers, *Theriaca Andromachi*, Mithridate, Spirit of Harts-Horn. In Intermitting Fevers I esteem *Lapis Lazuli* as a great Secret, given from half a Drachm to a Drachm in Spirit of Wine before the Fit. Spirit of *Sal Armoniac*, and the Diaphoretick Powder of *Craanius*, prepared out of Antimony, is also often given as a Secret in Intermitting. Tincture of the Jesuits-Bark is an excellent Remedy, and is thus prepared.

Take of Jesuits Bark three Drachms, Salt of Tartar one Drachm, Spirit of Wine as much as is sufficient. Extract a Tincture according to Art.

Also Jesuits Bark may be given with Purgers and Sudorificks as occasion serves.

Take of Jesuits Bark one Drachm, Scammony six Grains. Mix them to be given in the end of the Fit. Or. Take of Salt of Wormwood, Jesuits Bark of each half a Scruple, *Diagridium* four Grains. Mix them, and make a Powder.

Gentian by many is esteemed of equal Virtue with Jesuits Bark, which in like manner may be often given in Wine, or in the Form of an Extract in Pills. Also a Decoction of Gentian, or of the Roots of Silver-weed, or of Agrimony may be of great Benefit. Likewise in my Neighbourhood the Martial Powder prepared of Bole, and mixed with some Drops of Oyl of Cloves being given before the Fit, has

has a great esteem. I am wont to prepare a Febrifuge Salt; and to give it with Spirit of fix vitriol four Hours before the Fit, which is no Contemptible Medicament.

Take of *Mercurius Dulcis* fifteen Grains, *Crocus Metallorum* three Grains, *Antimonium Diaphoreticum* fix Grains. Mix them.

In Continual and Intermittent Fevers, that *Panacea duplicata* is of great Repute, which being given to the quantity of a Drachm with Crabs-Eyes in a convenient Liquor, has seldom frustrated my Expectation.

As to Mineral Waters and Baths, they may be used according as the particular Constitution, and the present occasion require. But of these we shall speak, when we shall treat of Fevers in Special.

As to Amulets in Fevers, they may be used or omitted. I have notwithstanding seen many Effects by this which follows. But whether or no it might not be by accident, I was never able to Judge.

Take the Nine Species of Herbs with Jews Bread and common Salt, put them in a Bag, and let it Hang for Nine Days about the Neck, after which, throw it in a River. It hath given great help in Intermittents, and oftener in Quartans.

As to what concerns Leeches, Scarifications, Velicatories, Infusion into the Blood, we will treat severally of each below.

Amongst other External Topicks we reckon the Febrifugal Plaster of *Strabelberger*. Rue Macerated in its own Vinegar, applied to the Wrists of the Hands, and the *Saphena* in the Foot (where the *Saphena* turns aside) is thought to do much good: Also a Pickled Herring cloven in the middle and laid to the Soles of the Feet, and likewise a Trench Spirit of Wine with a little Salt, is wont to be applied to the Head and Feet. *Matthioli*'s Oyl of Scorpions, being Mixt with Treacle, and the Back-Bone chafed therewith before the cold Fit is said to be most available.

CHAP.

C H A P. II.

Of an Ephemera: or One day Fever: and a Pure, Simple Continual.

§. 1.

Whatever hitherto we have said in General, has been delivered with all possible Brevity: But now we shall in order relate, by what Way and Method every Fever in particular may be known and cured. I judge therefore we ought to begin with *Ephemera's*, partly because they for the most part go before other Fevers, partly because they are the simplest and easiest of Cure, and to speak improperly, are Cured by Nature her self. It is so called by the Greeks from the Preposition *ἐπὶ* and *ἡμέρα*, a Day, as if we should say *lasting one Day*. Wherefore the Latins call it *Diaria* from its Duration. Some think it is so called from an Animal, mentioned by Aristotle l. 5. de *natura animalium*, which is Born and Dead in the space of one day, and is called an *Ephemeron*. This Fever is either short, or long, or very long. The short is called an *Ephemera*, the long a *Simple Continual*, the very long a *Fermentative* or *Putrid Continual*. But since, in our opinion, these Fevers differ only in Degrees, according as the Blood is more or less disturbed, and for that reason the Cure differs only in the degree of Medicines more or less Efficacious, we therefore will handle

these Diseases in the same Chap. An *Ephemera* is described to be a *very little perturbation of the Blood, usually arising from the incongruity of the Air, which binders insensible Transpiration*. But in a Continual Fever the perturbation of the mixture of the Blood is more violent. An *Ephemera* is divided into one Simple, which lasts only for one Day, and one Extense, which lasts for more. The most usual Difference of a Continual is in regard of the Increase and Decrease: when the Heat keeps the same Tenor till the *Crisis*, it is called *Hemotonos* or *equal*: When it always increases, it is called *Epacmaistica* or *Increasing*: When it always Decreases, it is called *Paracmaistica* or *Decreasing*. For Men commonly Measure the Increase or Decrease of the Fever, by the Increase or Diminution of the Heat, but in my opinion it might be better measured by the more or less troubled Mixture of the Blood.

§. 2. Subject.

THE Subject of these Fevers is by the common Consent of Physicians reckoned to be the Spirits; but it is rather the Mass of Blood, in which a disturbance is raised, and the Vessels of the Parts, in which obstructions are made.

§. 3. Dia-

§. 3. *Diagnostick.*

THE Diagnostick Signs of these Fevers do follow. They begin with a small Chilness, but in a Continual with a great one, then a Febrile Heat follows the Chilness, and sometimes begins the Fever, and holds from the beginning to the end, without any Paroxysms: Only, as was said before, sometimes it keeps an equal pace, sometimes it mends, and sometimes it slackens it, till by degrees it ceases. The more remiss and mild the Heat is, the shorter is the Fever, as in the *Ephmera*, which they call gentle and halituous, where the Skin feels soft and smooth. The Heat is stronger and more violent, if it last long in a Sanguineous Continual, so called from its cause; sometimes with the accession of a little Acrimony in a Continual, which they call Bilious. The rest of the urgent Signs are common and familiar to other Fevers, a Throbbing pain in the Head, Thirst more or less, bitterness of the Mouth in a Bilious one, Reaching, Vomiting, Loss of Appetite, Inconcoction, Looseness, Roughness and Hardness of the Mouth and Tongue, which are attributed usually to Humours first gathered in the Stomach, and then Putrefying there, restlessness and weariness of Limbs, waking or deep Sleep, thick Breathing and Heat of the *Præcordia*, a quick and frequent Pulse, and sometimes a strong and great one, yet not an equal or disordered, Red Urine, a Red Swollen Face, Turgid Veins, soft Skin, but in a Bilious one dry. The Urine, if these Fevers prove short, does not differ much from the Natural, but if long,

it is Red and Tinged; The Sweat, which often bursts out sooner than it ought, does neither smell strong, nor is troublesome; but in Putrid ones a Stinck is as easily perceived in the Sweat as in the Excrements of the Belly. But a Simple Continual is often Exasperated about the Evening and after Eating, the reason whereof is this, because insensible Transpiration is checked by the Pores of the Skin being closed towards Evening. This Fever lasts not above four or five Days. There is a Continual, called *Putrid*, or *Fermentative*, wherein sometimes Spots appear, which denote a great Perturbation, and a Volatil Salt to be in the Mass of Blood; the Pulse also in this Fever is very quick and unequal, and that especially because of the great Fermentation of ill Figured and disordered Particles; hence comes an Irritation of the Heart, and by consequence an unequal Pulse, which depends upon a strong Influx of the Animal Spirits into the Heart, and Fibres of the Arteries. Sometimes there is a looseness, and puffing up of the *Hypochondria*, sometimes *Deliria*, immoderate Watching, Anxiety about the *Præcordia*, and Swooning with a Cold Sweat. But if the matter tend to the Nervous kind, then there arises Trembling, Shaking Cold, Pains, Convulsive motions, Spasms of the *Viscera*, Stupidity, Phrenzy, &c.

§. 4. *Cause.*

THE Ancients say, That any Heat, either External or Internal, is able to raise these Fevers, but the better the temper of the Body is, upon which they happen, the shorter

Shorter the *Ephemera's* are. For a well tempered Body, if it be inflamed by Adventitious Causes, since the Heat cannot continue long in it, must needs shorten a Fever, *Ephemera's* and short Fevers, according to them, are bred, which cease in one day, where the Heat is gentle, and breeds no disturbance in the Body, and when it is not in the least impure: This Fever usually begins without a Chills, and expires without a *Crisis*, by insensible Transpiration. They say, that Simple Continual Fevers last the longer in a Choleric or Sanguine Complexion, because the Heat is increased by these Humors, and they prove it by this, for that young, Plethorick and hot natured People, & such as have had the *Hæmorrhoids*, or an *Hæmorrhage*, or the *Menfes* stop upon them, are most subject to this Disease. But if this Diary Fever find a foul Body, and the impure Blood be apt to Putrefy, it continues no longer a Simple and Pure Fever, but when the Blood takes Putrefaction, these Simple Fevers are by a sad *Metamorphosis* changed into long Putrid Continuals.

The Galenists distinguish Putrid Fevers into Continual and Intermittent: They say, that Continuals are bred, when the Putrid Vapor, or Preternatural Heat, which arises from Putrid Humors, afflicts the Heart continually, and produces a constant Heat therein, whence, as they say, the Heat of the Fever is diffused all over the Body. Or they are Intermittent, when the same Vapors are carried to the Heart at certain intervals of time. They again divide the Continual into Essential and Primary ones, or Sym-

ptomack. They are called *Essential*, when the Putrefaction is kindled in the common Veins, and not in the private Parts; but *Symptomack*, when Putrefaction or Suppuration is made in some particular part enflamed, from whence Vapors may be Communicated to the Heart by the common Vessels, such as appear in a Pleurisie, and in other Inflammations. Some are called *Continual Tertians*, which are worse every third Day, some *Quoridians*, which are worse every day; and others *Quartans*, which have a Fit every fourth day, and they make many other unnecessary Divisions.

They affirm, that Putrid Continuals are bred of Putrefaction of Humors, which are contained in the greater Veins and Arteries, and that, according to the Various Nature of the Putrefying humors, there are various sorts of them. From which Putrefaction, they say, Vapors ascend to the Heart and Brain, and hence commonly they derive all the Symptoms that Occur in this Fever.

The Galenists place the Cause of a Putrid Continual about the Heart, and in the *vena cava*, and the Seat of a Diary in the Vital Spirit and Heart it self.

§. 5.

According to *Paracelsus* the Cause of these Fevers is a Fetid Sulphur, with a dissolved Mercury, and an impure Salt gathered usually in the Region of the Liver; and he asserts, That these Fevers arise from Nitro-Sulphureous Impurities.

§. 6.

§. 6.

HElmont, making the Seat of a Diary Fever to be in the Cavity of the Stomach, holds, That it arises for the most part from Corrupt Meat, and he proves it by this, That this Fever ceases only by Vomiting. He attributes the cause of a putrid *Synochus* not to Galenical putrefying Humors, but to a Corrupt Vagrant Acidity, which irritates the *Archæus*. This *Archæus* is provoked by some occasional cause, which is like a Thorn, because of the *Blas*, which it has from the Soul; and this *Blas* sometimes is in such a Fume, that it makes the *Archæus* Angry and Fiery. The occasional cause often arises from hence, That the Chyle is made more acid than usual, through some fault in the Stomach, and being carried into the Veins of the Mesentery, by the fault of the Duumvirate, it causes these Fevers. The Galenists also, according to our Author do assigns in bringing the Example of Dung, for illustrating Putrid Fevers, which, if Putrid, grows Hot; But, he says, the more it Putrefies, the less Hot it is, nor is it Hot at all, if spread abroad. Therefore it only grows Hot, when it is gathered Wet on an heap; so Hay likewise is set on Fire by the Spirits of its own Salts Compressed. Heat, in our Author's opinion is not a Fever, but it is a certain *Blas* arising, by propriety from the *Archæus*, to which Cold as well as Heat is Natural. Therefore the *Archæus* is the only Efficient of Heat and Cold, which are passions of Life, that the *Archæus* moves by its proper *Blas*. Whence, though a Carcase putrefy,

yet there is neither Heat nor Cold in it.

§. 7.

THE cause of this Fever, according to *Saillus*, is a subtil and Spirituous Portion of the Blood, too much Exagitated and Heated, which oftentimes, like Wine, Boils and Ferments upon any small occasion. But when upon a long Agitation and Ebullition of Spirituous Blood, the Grosser Sulphureous Particles do at length take Fire, then they last above four and twenty Hours, and are called *Ephemer* of several Days, or Simple Continuals, and not Putrid. And the cause of a Putrid Continual is the Oily or Sulphureous part of the Blood, which being too much heated is above measure Turgescent, and takes Flame like Wine, which is too high exalted by its Sulphur, or like moist Hay, it grows Hot of it self for want of Ventilation, whereupon immediately the whole Sea of Blood is rarefied, and as it were kindled in the Lungs and Heart, (wherein Accension is made through the Fault of the Air) hence it is carried by a most Rapid motion through the Vessels, and by its Delagration disperses many *Effluvia* of Heat. Hereupon the whole Mass of Blood (like Water over the Fire) boiling up continually distends the Vessels, Vellicates the Brain and Nervous parts, raises Convulsions and Pains in them, by its Effervescence usually dissipates the Vital Spirits, destroys the Ferments of the *Viscera*, hinders the Offices of Concoction and Distribution, often depraves the Nutritious Juice designed for the Nervous kind, so that

that hence disorders of the Animal Spirits especially do follow, yea, the whole Oeconomy of Nature in a manner is perverted.

§. 8.

Splivus reckons the six Non-Natural causes, used amiss, for the causes of all Diary Fevers. Wherefore he thinks it may arise only from the Heat of the Air, or Sun, or Fire, or a Bath: for a Diary is very easily caused by Cold coming upon the Heat of the Body, so it may by Generous and very Spirituous Wine, especially if it be Aromatick, from too much motion and tiring of the Body. This *Ephemera* is usually caused by the Passions of the Mind, Anger, Grief, &c. and so is a Simple Continual, Pure, not Putrid. He has observed this Disease to be caused by too much watching. And, beside a very frequent Pulse, several observable Symptoms appear in Diary Fevers for the Notification of causes single or conjunct.

He says, the cause of Simple Continuals is sometimes Bile, sometimes *Lympha*, sometimes both indisposed, & producing a sort of Effervescence in the right Ventricle of the Heart. Wherefore he asserts that there is always a preternatural Pulse; and according to the diversity of the cause he distinguishes continual Fevers into Bilious and Lymphatick: Under the Name of *Lympha* he also comprehends the Pancreatick Juice, the *Saliva*, and Liqueur arising from the intestinal Triumvirate.

The cause of Putrid Continuals, which trouble the Patient with a great and constant Heat, he attributes to the Acrimony and too

great Inflammability of the Bile, whereby, he says, that a Vicious Effervescence is perpetually raised, not only in the Right Ventricle of the Heart, but also in the *Intestinum tenue*; especially by the Pancreatick Juice's Flowing thither by little and little, being made too sharp by its Stagnation, and so causing a Paroxysm. And therefore he thinks there is an Obstruction in one or more passages of the *Pancreas*, and reckons the Cure must be directed thither.

§. 9.

VV and the *Cattellians* place the cause of a Diary Fever in a small Perturbation of the mixture of the Blood. Wherefore the external Air, by reason of its Particles, is able to disturb the mixture of the blood; which Mixture, as it is variously disturbed, causes various sorts of Fevers. Yet the hindrance of insensible Transpiration alone does not produce a Fever (for then all Men in Winter, when insensible Transpiration is hindered, should have a Fever) but only such a hindrance as disturbs the Blood. This Disease is usually produced by hindrance of insensible Transpiration, and by obstruction of the Pores. In the Fits we feel Cold, by reason of the little motion of the Blood; but then again, when this thick Humour is more actuated by the Animal Spirit's flowing into the Heart, then it moves faster, and therefore we feel Heat. The Patient thinks he is Cold, which he is not, the reason is, because Cold is usually the cause of shaking, therefore the Soul judges, when the Body is troubled with a Shaking, that it is Cold, which

which yet does not follow: for the Saline or Acid Acrimony, Vellicating the *Panniculus Carnosus*, causes a Shaking; yea, in Child-bed Women the coming of the Milk may cause this Fever.

But in a Putrid Continual the Mixtion of the Blood is more disturbed; yea, so much, that the Fermentation of it is not able to conquer and restore the bad Mixtion; because the Peccant Humor is pertinacious and continually glides out of its Receptacle into the Blood. This Disease has often its rise, from Cold Drink, and too much Exercise, when the Body is very Hot, and all the Pores are altered on a sudden, so that insensible Transpiration is hindered. Violent Exercise, as is said, and Drinking much Wine may deservedly be reckoned among the External Causes, inasmuch as by moving the Blood much, and recovering the Humor out of its Receptacle, they wash it out of the *Viscera*, and carry it into the Blood; which Humor then has the Pores of its Particles so changed by its Stagnation, That the foreign matter of the first Element passes through, and disturbs the mixture of the Blood. Yet this Cause of it self can never produce a Fever; for thousands of People Exercise and Drink too much, who fall into no Fever. But we must observe this, that such Men as fall into this Fever upon such a cause, must needs have many peccant Humors in their Vessels: Wherefore it will be proper for such people to Purge, that these Receptacles may be washed out. Great restlessness attends such as are troubled with this Disease, which arises from hence, That much Volatil Salt is found in their Mass

of Blood, which by Vellicating the Nerves opens them, and if the Patients out of their Restlessness, tumble from one side of the Bed to the other, and expose themselves to the Cold Air, insensible Transpiration is hindered, and so the Volatil Salt, which would otherwise pass by insensible Transpiration, carries in the Body, and by further Vellicating and Pricking the Nerves, continually encreases their disquiet, and sometimes causes Death.

Scholastick Authors do not well explain, how Putrid Fevers differ from the not Putrid, they say, indeed, that in Putrid Fevers there is an unequal Pulse; but this is only, because the drops of Blood, that enter the Heart, are not all equally ill mixt, which makes nothing for the real difference of Fevers. According to us, Fevers differ only as to degrees, according as the Blood is more or less disturbed; and therefore the Cure, as I said before, differs only in regard of more or less Efficacious Medicines: Then, in *Sylvius* his opinion, they differ in regard of divers Symptoms, the Cure of which must be undertaken severally, as necessity requires.

§. 10. Prognostick.

AN Ephemera is not naturally dangerous, but easie to be cured, and often ceases of it self in a Sweat, without the Aid of a Physician. But because this easily turns to a Putrid Continual, or sometimes to a Hectick, through some Error in Diet or Medicines, therefore it must not be neglected. The Prognostick of a Simple Continual is, that it often degenerates into a Putrid and an Hectick, because

cause the Blood is much disturbed; otherwise it usually ends in a Sweat or Hæmorrhage, within four or five days.

But a Putrid Fever is dangerous, for it is a great disease, seeing the Treasure of Life, the Blood, is affected, and much disturbed; whence it easily turns to a Malignant Fever. That is safe, which decreases, that is worse, which increases. It goes off in Sweat and Urine, when the Pores in these parts are open, sometimes it ends in an Hæmorrhage, sometimes in a looseness.

§. II. Dietetick Cure.

Concerning the Diet, which is handled very Copiously by Physicians in an *Ephmera*, I shall be brief; because this Fever lasts not long. The Air must here be considered, not only on account of its Coldness, but, as we said, on account of its Particles, which may very much disturb the mixture of the Blood. For by the excessive coldness of the Air insensible Transpiration is hindered, which also disturbs the mixture of the Blood; thereby also a tough and gross Humor is bred, which contributes something: Let the Patient also have a care of too hot an Air, nor let him expose himself to the Sun, Baths, &c. because all these things may cause a Fever.

As to the Food, it must be spare; and here abstinence is often the best remedy, according to *Celsus*, who says, *Many great diseases are cured by Abstinence and Rest.*

Let Motion and Rest, Sleep and Watching, and the Passions of the Mind be moderate.

But in a Simple & Putrid Continual, let the Air be temperate, serene and pure; for one too hot or too cold does harm. Let the Meat be of good Juice and easie of digestion. It must be immoderately taken, out of the Paroxysm; for impure Bodies must not be fed. In the very Paroxysm; according to *Willis* his opinion, it must be totally subtracted.

He also advises the Drink to be moderate, that is, a Decoction of Harts-Horn, with Raisins and Scorzonera Root, well wrought finall Beer, into which altering Tinctures may be dropt, to Wit, of Roses, Violets, Vitriol of Mars, Vitriol, Salt. Wine must wholly be abstained from, or it must be corrected with Acids, and Drunk rather for Gratification, than to Satiety. Much drinking of wine is very hurtful, upon which Patients are very apt to fall into an Epilepsy; as I have observed in my practice: for any Spirituous drink moves the Blood and Animal Spirits very much; and therefore too much use of Cordial Spirits is hurtful, because they exagitate the Humors.

Great and violent Exercise also does hurt: in like manner too long Watching; but especially Passions of the mind; Anger, Grief, Care, &c. are naught.

§. 12. Pharmaceutick Cure.

FOR the Cure of an *Ephmera* the Ancients were wont to use Bathing in warm Water, of which they also made great use in a State of Health. Then they kept a Cooling and Moistning Diet of Barly Cream, cooling Broths, Ju-leps of Fair Water and cooling Syrups, &c.

C c c

But

But according to the Diversity of Causes they a little vary the Cure. If therefore an *Ephemera* came from the heat of the Sun, they used a cooling Diet, and transported the Patient into a cooler place, applying an *Oxyrrhodinum* to the Forehead and Temples. If the Fever came of Cold, especially when the Patient, hot with Exercise, had exposed himself to a cold Air, then they gave a Sweat with their usual Sudorifics. If from labour, they ordered Rest, and a fuller Diet, but ease of Concoction.

If Anger caused it, they ordered Cheerfulness; if Watching, Sleep; if Fasting, a good Diet; if Surfeiting, abstinence from Meat; if Obstructions and Cacochymy, Purgatives; if a Plethory, Bleeding.

They say, the cure of a Simple Continual consists in Evacuation of Blood, cooling, and opening of Obstructions: Therefore *Galen* 9. lib. Method. c. 4. performs it with two principal Remedies, that is, by letting blood till one faint, and by drinking Cold Water. However the wiser sort of Galenists dare scarce practise such Bleeding; but think it is sufficient, if such a quantity of Blood be taken away at several times, as is necessary for the cure of the Disease. As to the plentiful drinking of Water, *Galen's* Disciples do not admit it, but instead thereof substitute divers cooling Juleps, of a Decoction of Barley, Endive, Sorel, Cichory, &c. also Emulsions and distilled Waters. Externally they apply cooling Epithems to the Liver, and Liniments of the same quality both to the Liver and Loins of, *Unguentum rosaceum, refrigerans Galeni, Santalinum, &c.*

In a Putrid Continual, which has more violent Symptoms, they order Bleeding and Purgings: For their whole Cure consists in these three things, Bleeding, Purgings and Cooling. Therefore they use divers Juleps, and several External Coolers. But I am weary of setting down, what all practical Books are full of.

§. 13.

THE Paracelsus conclude, That these Fevers arise from nitro-sulphureous impurities: Therefore they commend all dissolving Medicines, especial purging with Antimony: for according to them every Fever is carried off by such Purgings. For correcting the peccant Matter, they commend rectified Spirits of Salt, especially in Putrid Fevers, *Elixir Proprietatis*, and several other things, which you will meet with hereafter.

§. 14.

Helmont, who places the Seat of an *Ephemera* in the Cavity of the Stomach, and affirms, That it often arises from corrupt Meat, cures it by a Vomit. And in a Putrid Fever he commends his Appropriate and Specifick Remedies, especially his *Mercurius Diaphoreticus*, wherewith, he says, he Cures Fevers at once taking; which Remedy nevertheless he conceals. He also highly extols *Arcanum Corallinum*, but when we are destitute of it, he recommends to us particular Volatil Aromatick Remedies, which given in these Fevers never fail the Physician.

He asserts, That Vomitives and Purgers

Purgers often do good, while upon the Stimulation of one thing, they throw off another, that is ready and near it.

§. 25.

WHIS Curative intentions in a Diary Fever, are to check the heat of the Blood, and to procure free Transpiration. For which, he says, Venesection, a very low Diet, or rather Abstinence, cooling Drinks, and Clysters are good: but, he says, above all things, Sleep and Rest do most good, which being wanting, he reckons they ought to be timely procured by Opiates and Anodynes.

He, as well as we, acknowledges, That in a Putrid Fever the mixture of the Blood is disturbed by an over exalted Sulphur. And he inculcates, That in this Fever four times should be observed; that is, the Beginning, Encrease, State and Declension, which in some are over sooner, in others later. And if this Fever be violent in the Beginning, and suddenly fire the whole Mass of Blood; if it hold on constantly and equally with violence of Symptoms, without Remission, for the most part within four days the Blood will so blaze, that the adust matter, which makes the *Crisis*, will rise to a full Turgescence: But if the Beginning be slow, and the Accension often interrupted, it will come to the height about the seventh day: And if the Disease begin yet more remissly, the State of it is usually protracted to the Eleventh or fourteenth day. He also concludes, That the Critical Motions in this Fever happen on the

fourth, seventh, eleventh or fourteenth day, not by direction of the Planets, but through necessity of Nature.

He has four general Intentions about the Cure of Putrid Fevers, on which the stress of the whole Affair lies. 1. To free the Blood from burning, and quite suppress the Flame, or Fire, kindled in its Sulphureous part, which often happens about the first Beginning of this Disease. 2. To contrive, since the burning of the Blood cannot be quite quenched, that it may perform its Desflagration more mildly at least, and with less damage. 3. When the Desflagration is over, to free the Liquor of the Blood from the Recrements of the burnt, adust Matter, and afterwards to reduce it to the Natural Form and Vigor. 4. To obviate all urgent Symptoms.

He judges therefore, that in the very Beginning Blood should be let: for by bleeding the Blood is ventilated, and the hot Particles being too much Glomerated, and very nigh Burning, are separated one from another, just as Hay, that is apt to take Fire, if it be exposed to the open Air, its Burning is prevented.

He will also have a thin Diet kept, in which nothing Sulphureous or Spirituous must be used. The Bowels also, especially the firstways, must be discharged of their load of Excrements; for which end he commends Clysters, and sometimes also Vomits and Purges, but then they must be seasonably administered. In the Increase of the Fever, if the Blood ferment too much with a strong and violent Pulse, distending the Vessels very much; and if

Watching, Phrenzy or Head-ach be very violent, he inculcates a repetition of Bleeding, and at that time he thinks Sudorifics should be omitted; and that Opiates and Anodynes should rather be given, as things that fix the Blood and Spirits, and preserve its Texture. He also highly commends Juleps, Decoctions that cool the hot *Viscera*, temper the Blood, and refresh the Spirits, the acid Liquors of Vegetables or Minerals, and also purified Nitre, inasmuch as these check the heat of the Blood, and quench thirst.

But he is against giving hot Spirituous Waters, and Cordial and Bezoardick Powders (if the disease be without Malignity.) Yet if Nature endeavour a *Crisis* by Sweat, and Signs of Concoction appear in the Urine, then he allows of Sweating or gentle Purging. If all things grow worse, the Spirits must be recruited, only with Cordials, both Internal and External, of which in another place.

§. 16.

Sipping judges very well, That the Cure of a Diary Fever is various, according to the Variety of its causes. When therefore this Disease is produced by Heat of the Air, a temperate Air must be sought, or at least it must be tempered, by Sprinkling Cold Water or Vinegar on the Floor, or by strowing the Room with cooling Plants; he prescribes also the following Julep for the Patient's Thirst.

Take of Water of *Carduus Benedictus* fix Ounces, Sorel two Ounces, Syrrup of red Poppy one Drachm, Spirit of Nitre fix Grains. Mix them.

But when the Fever arises from Cold, coming upon excessive Heat of the Body, he, to good purpose, mixes Volatil Salt of Harts-horn, or Sal Ammoniack one Scruple, and gives it several times.

When an *Ephemera* is caused by strong Drink, he thinks the Cure should be performed by some Acid Drink, as the Julep now prescribed, or the Tincture of Roses following; which he commends in all Febrile heat.

Take of Water of Barly thirty Ounces, red-Rose Flowers dried one Ounce, Oleum Sulphuris per campanam, what is sufficient for a grateful Acidity. Infuse them in a Glass Vessel stoppt, and in a warm place, to the Extraction of a Red Tincture. Add to the Colature of Syrup of Jujubs three Ounces. Mix them.

If a Diary Fever come of too much Labour or Motion of the Body, the Animal Spirits must be Recruited with some Spirituous Drink: to this end he commends the following mixture, to be taken at some distance of time.

Take of Water of Linden-tree Flowers, Betony, Fenil each two Ounces, rectified Spirit of Wine, or *Aque vita Matthioli* one Ounce and an half, Sweet-Spirit

Spirit of Salt one Scruple, *Fuligin Rosatum* one Ounce. Mix them.

When an *Ephemera* comes of violent Anger, he prescribes the following Mixture, which corrects the Bile, that is both disturbed and too sharp.

Take of Water of Plantain, Lettuce, Sorel each once Ounce, Cinnamon half an Ounce, sweet Spirit of Salt half a Scruple, Syrup of *Diacodium* one drachm. Mix them.

When a Diary Fever comes from Grief, he commends a Mixture, which uses to mend the austere juice bred in all great Grief, & which also may restore the Effervescence of the Blood in the Heart, that is then Sypoiled and Febrile.

Take of Water of Penny-royal, Fenil each two Drachms, *Spiritus Carminativus* half a Drachm, *Laudanum Opiatum* two Grains, of Sal Ammoniac Volatil one Scruple, Syrup of Fenil one Drachm. Mix them.

When this Fever comes from too much Watching, then Sleep must be gently procured, by giving an Emulsion, or a Grain or two of *Laudanum Opiatum*. Where there is a *Plethora*, you may Bleed whenever you please, not till the Patient faint, but at several times; and when Bile abounds in the Body, he will have it diminished by some gentle Cholagogue, or altered by divers Juleps, here and there described. Also when the Mouth is bitter, such things are good as gent-

ly carry off Bile by Stool.

As to the Cure of a Continual, since there are several differences of Continual Fevers, both as to Causes and grievous Symptoms that attend them, it is requisite that we recount some together with the Method of Cure, according to the judgment of this worthy Author. Therefore he Cures a Bilious Continual by correcting the Saline Acrimony with temperate Acids, such as Sweet Spirit of Salt, &c. 2. By amending the inflammable Oleosity of the Bile by austere Acids, Sempervive, Plantain, &c. 3. By diminishing the Bile with Cholagogues, but gentle ones and Subacid, such as Cream of Tartar, Salt of Tartar, *Tartarum Vitriolatum*; Receipts of which Remedies you may meet with in authors, that would tire me to recount, and so you may find the Cure of all the Symptoms sufficiently described by the foresaid Author.

As for a Lymphatick Fever, and other sorts, which he refers to Continual ones, we shall treat of them in another Chapter hereafter, and now we will turn our selves to our own.

§. 17.

IN OUR judgment the Cure of an *Ephemera*, which is truly such, is needless; for it admits not of Cure, because it uses to cease of itself by Sweat, and a Physician is rarely called to the Cure of this, unless among Rich Men. But since it may easily Degenerate into another Fever, especially a Putrid Continual, we ought to Cure it. And in the mean time, lest this Fever should return, one may Purge,

that the fault in the Mass of Blood may be removed, especially if Bile abound; for which end the gentle Cholagogue following, or some such like, will be proper.

Take of *Extractum Cholagogum* half a Scruple. Give it If Phlegm offend, it may be sharpened with two Grains of Trochiscs of Alhandal, made into Pills.

But all Purges and Vomits are suspected by me, because they have not respect to the Fever, if there be no Cacoehymy; for the disturbed Mixture of the Blood is not restored by Purgatives, but by Diaphoreticks. Therefore I think the Cure should be begun with giving a Clyster; and in a Simple Continual a little Blood must be taken away, and afterward gentle Antifebriles, that dispose the Body to a Sweat without any great disturbance of the Blood, must be given at times.

The good Women take only hot Wine with Mace, Nutmeg and Sugar. We add half a Drachm or a Drachm of Treacle, and we take Generous Wine; because that which is not so, will not cause Sweat. For the poorer sort, they may take half a Drachm of Crabs-eyes or a Scruple of Powder of Coral. Bezoar Stone, because it is hard to come by, ought not to be much prescribed. I should prefer the use of Harts horn far before it And here a Decoction of Barly with juice of Citron or Limon, or a Decoction of Harts-horn with Scorzonera will be proper. Always some Drops of Spirit of Nitre, or of *Tinctura Confortativa cardamomizata*, or Tincture of the greater Daizy, shar-

pened with Spirit of Vitriol of Mars, or some other cooler, should be put in the Drink of Febricitants: Febrifuge Waters also answer these ends, and Emulsions of the cold Seeds Juleps of a decoction of Barly, made with shavings of Harts-horn and Tamarinds. Absorbents also will be good, such as Testaceous Powders, *Antimonium Diaphoreticum*, divers external Epithems for the Liver, Heart, and Wrists. As to Blood-letting here also we must act Cautiously, it may be let where there is a *Pletthora*, and no Suspicion of Malignity.

But in a Putrid Continual, where an Humor endued with a Fermentative Quality is Peccant, and raises a Periodical Continual, in the beginning, to wit, on the first or second Day, if you see any thing to be moved, Move, Purge and Bleed. Among Purgers the best are Laxative Infusions; also Emeticks given prudently do often avert the grievous Symptoms. When you have a mind to Sweat, the Belly must first be loosened, lest some of the subtiler Parts of the Excrements be separated and carried into the Habit of the Body and all over, by the Diaphoretick Medicine, whereby other Mischiefs might be produced. In this case Clysters for a young Body are very proper, especially in the beginning of the Disease; but in Old Men they are not so safe; nor must Clysters be given when the *Crisis* is near, nor in the Declension of the Disease. And whether one should Purge or no, the Physician may guess in some measure by the Appetite, which if it be decayed, it is usually a Sign that the Stomach is laden with bad Humours, which ought first to be gently

ly Purged off. Among Alterers, Acid Mineral Spirits are reckoned; among Diaphoreticks the Mixture of three things, Spirit of Harts-horn, Spirit of Soot, and other things to be found in Practitioners, are safe. In a Fever such things must never be given as obstruct, but in stead thereof we may use *Lapis Prunelle*, Spirit of Nitre, and Camphore, because these obstruct not: So also plentiful drinking in Fevers does no hurt of it self, yea, it does good, if it do not obstruct, which it will not, if it be set a very little on the Fire, yet so as not to be hot, but only that it may not be actually Cold; then a little Spirit of Nitre may be added, and so it will do no harm. The Stomach is often extended by cold Drink, inasmuch as this obstructs its Pores, & so Wind is kept in it, which distends it. You may in this Fever use Camphore as an *Arcanum*, especially if Watching, Pain, and other Inconveniences accompany it, all which said things Camphore Cures, if three or four Grains of it be taken, because by its Subtily it incrassates without obstruction. You must not presently run to Cordials, for if you do, you will greatly endanger the Febricitant. You must reckon the same of Narcoticks, they may be given about the Eleventh Day, that is, in the Declension of the Fever: for Continual Fevers must not be dealt violently withal, nor can they be Cured by one Remedy, (which yet *Helmont* brags of) but leisurely. Wherefore we give Sudorificks at times, as *Sylvius* does, either in form of a Mixture, or in Powder,

Take of Water of Fenil, Baum, Roses once Ounce, Tincture of Saffron one Drachm, *Bezoardicum Minerale* half a Scruple or a Scruple, Spirit of Salt twelve Drops, Syrup of *Cardus Benedictus* six Drachms. Mix them. In decay of Strength a Drachm of *Confectio Hyacinthi* may be added.

In the *Interim*, at some distance of time, about twenty Grains of *Lapis Prunelle* with six Grains of *Bezoardicum Minerale* may be given. And if the Patient Drink much, add to every Draught Ten or Twelve drops of Spirit of Nitre, and so the Thirst will cease. All Nitrous things are proper here, inasmuch as they Precipitate and cool, adding Sudorificks and Camphore, for so without doubt the Fever will cease. The following Powder has been experienced and seldom fails.

Take of *Bezoardicum Minerale*, *China* each half a Scruple Camphore three Grains. Let the Patient Compose himself quietly to Rest, and expect only a small Sweat.

Oftentimes all the Blood is disturbed in this Fever, and so turns to Malignity, which alters the ordinary Method of Cure, especially as to Purging and Bleeding, which must then be let alone: In this case also in the beginning of the Fever the Pulse must be felt exactly; for if it be frequent, I dare not give a Cathartick; and if it be weak and low, I suspect Diaphoreticks, especially strong ones; wherefore in

this case we must succour Nature by more moderate things, in the manner following.

Take of *Aqua Confortativa Augustana* two Ounces, *Cornu Cervi citrata* one Ounce, Cinnamon Water half an Ounce, *Saccharum perlatum*, as much as will make it grateful. Mix them.

For comforting we commend Electuary of Pulp of Citron, with Conserve of Wood-forel, Currans, &c. adding some *Species Diamargariton*, de *Hyacintho* and Ivory not Burnt. Whey also of Goats

Milk may be boyled with Citron-Peel, and *Chysus Antimonii*, tinged with Tincture of Violets, may be drop't into it.

Timely care must be taken of the Symptoms that attend these Fevers, such as loosness, Watching, Phrenzy, Thirst, and other Accidents, troublesome both to the Spirits and Blood.

If, after the Fever is cured, the strength nevertheless remain low, and the Weakness be extreme, you may lay a lively lusty Youth in Bed by the Patient, according to Dr. Sydenham, my very good Friend, his Mind.

CHAP.

C H A P. III.

Of other Putrid Continual Fevers, of a Causus or Burning Fever, of a Continual Quotidian, a Continual Tertian, and a Continual Quartan.

§. 1.

IN the preceding Chapter we Treated of those Fevers that are commonly called *Putrid*, for that they Putrefy, and Wax hot like moist Hay. We now subnect their *Species*, and first of all a *Causus* *nauseosus*, or a burning Fever, is a *Continual Fever*, arising from a great Perturbation of the Blood, constantly afflicting the Patient with a most violent Heat and unquenchable Thirst. This Fever only differs in Degree from a *Putrid Synochus*. But if the Exacerbations of Heat be observed to return after some Intervals of Hours or Days, the Fever assumes other Names, and according to the Variety of the Humor and Accession, is either called a *Quotidian*, which comes but seldom, or a *Continual Tertian*, which is more frequent, or a *Continual Quartan*, which is the most rare of all. They first of all divide a *Causus* into *Malign* and *Benign*. The difference may also be fetcht from the Causes, why one is more *Mild*, another more *Vehement*, also why one is *Simple* another *Compound*; for one arises from disproportionate Particles disturbing the Blood, another has

many Particles intimately mixt together, from whence also other Symptoms are induced. They are distinguished into *Remitting* and *Intermitting*.

Remitting is when the Fever is less, but *Intermitting* is when it is quite gone, and after that returns again. In the Paroxysms of *Intermittents*, there are for the most part shaking Fits, whereby also they are distinguished from *Continuals*.

There is also a Bastard *Causus* or *Elodes*, in which the Sick Persons Sweat continually and excessively. That Fever also is called *Affodes* or *Fastidiosis*, when the Patient has a Nauseousness and Vomiting.

Part Affected.

The Part Affected according to the Ancients is that Noble *Viscus*, the Heart; but the *Moderns* think it to be the Mass of Blood, and the little Vessels of divers Parts.

§. 2. Diagnosticks.

THE Diagnosticks of a *Burning Fever* or a *Causus*, are taken from these two Marks (*viz.*) a great Heat, and an Extraordinary Thirst; as for the other Symptoms, they

they are the same in this Fever as in all others. A *Quotidian Continual* Fever is manifest of it self, so long as it is in the Increase or Waxeth worse and worse, otherwise we must be beholden to the general Signs of Continual Fevers; for the hotter the Predominating Particles are; or the sharper or more Bilious they are; or, as in the Sense of the famous *Willis*, they are either Sulphureo-Saline, or Salino-Sulphureous, the more they disturb the Mass of Blood, and by Consequence the Symptoms are greater, or lesser.

The Signs of a *Continual Tertian*, besides those mention'd before as relating to Continual Periodical Fevers, are their growing worse and worse every third Day. But in Continual *Quotidians* a violent and beating Pain doth often shake the Loins, Back and Joynts of the Patient.

The Diagnostick of a *Continual Quartan*, is its more severe and constant return every fourth Day; the Heat 'tis true, is but dull, but afterward grows fiercer, the Pulse in the beginning small and slow, then it becomes great and swifter without shaking, or any Stiffness or Cold.

§. 3. Cause.

THE Old Galenists divide a Burning Fever into *Legitimate*, & *Bastard*, in which the Symptoms are milder. The *Legitimate* Burning Fever, they say, springs from the Bilious Humour putrefying within the greater Vessels, bordering on the Heart. But the *Bastard* Cause, they say, is derived from Bile mixt with

Phlegm or with a Salt Phlegm putrefying in the same Vessels.

But a *Continual Quotidian*, they say, comes from a Pituitous Blood putrefying in the Veins; and therefore they unaniously agree it hath its Increase every Day, and they prove it, in that young Children and Boys are often subject to this Fever, as also Old Men, and those that are Fat, given to ease and Feasting; but these Fevers, they tell us, are not so common, because Phlegm as they will have it, putrefyeth more difficultly.

A *Continual Tertian*, they say, which every Third Day grows more troublesome, comes from a Crude indigested Bilious Blood, putrefying in the *Vena Cava*. To which the hot and dry Indisposition of the Liver remotely contributes, as also hot and dry Nourishment, Youth, middle Age, or too slender Diet, too violent Exercise, too much Watching, or the frequent return of a hot and dry Air.

But a *Continual Quartan*, they say, happens but seldom, which grows fiercer the fourth day, and is produced from a Melancholy Blood putrefying in the Branches of the *Vena Cava*, and of it self naturally produceth Melancholy Blood, and disposeth it to Putrefaction.

As for the Fever call'd *Affodes*, a sort of a Burning Fever, they say it proceeds from some Violence committed on the Stomach by some sharp and Bilious Humour, that pricks or provokes its Orifice or Tunicles.

But as for the *Elodes*, a Fever which is always accompanied with Continual Sweats, it proceeds either from some great Putrefaction of

of the Humors, or certain Malignity that preys on the very substance of the Body.

§. 4.

Paracelsus, who makes sixty sorts of Fevers, and all from one and the same Inflammation, without appropriating to them any particular Seat, saith, They are the Affects of Sulphur, and Nitre put into a Flame, or enkindled. Sometimes he calls a Fever a sort of an Earth-quake, from its shaking Symptom, some times again he calls it Mercury and Nitre, including the Cause and Remedy in the Definition.

§. 5.

Helmont layeth the fault of this Irregularity on the *Archæus* or Lifes Chariotier, who, on some Accidental Cause or other, is provoked to this disorder; for he proves by many good reasons, That it is impossible for the Spirit or Humors to putrefy; the accidental Cause is in a manner like a Thorn, which puts the *Archæus* into some extravagant Motion; nay, sometimes the *Archæus* of its own Accord, upon some small mistake, grows wanton, and in a manner furious. Now these Thorns (he Speaks of) are nothing else but certain Acute Corrosive Salts, produced from Indigestion, and which contribute to the firing of the *Archæus*.

§. 6.

Willis divides a Putrid Synochal Fever into a

Symptomatical, and *Essential*, That is said to be Symptomatical, which takes its rise from some other Disease preexistent in the Body; so that the Fever is only a Symptom that attends the foregoing Disease, as the Fever which follows a Pleurisy, a Squinancy, a Wound, or Apostem in any chief Part; and as the Author saith, no Putrid Fever is altogether Symptomatical. For the Squinancy or Pleurisy are the Effects of a Fever, and not the Cause. In these Diseases he observes a certain disposition of the Blood to coagulate; and that from its Heaviness, or Sluggishness; as it is in Milk, when it begins to Sowre, for then it is not Boyl'd without Coagulation: so in the Mass of Blood, there is a certain Sowreness, which naturally disposeth it to Coagulation; for every Extravasation, and Inflammation from thence, in a Pleurisy, Squinancy or Inflammation of the Lungs, doth not always come from the Abundance of Blood, or Fulness of the Vessels, but the Blood is often stopped in its Motion, and in a manner stands still, from whence follows a sharp Pain. Nay, the Blood sometimes stands still in the very Heart, whence your pleuritical Persons often complain of a great Heaviness or Weight about the Heart, and when our Author opened the Bodies of some that dy'd of these Diseases, he found in the Cavities of the Heart and Vessels about it, the Blood in certain Morfels or Pieces. He saith, That in a *Simple Synochus*, the more Subtile or more Spirituous Part of the Blood is inflamed.

But in *Putrid Fevers* arising from the Catching of Cold, he concludes

cludes, That the Evacuation being stopp'd and those *Effluvia* retained (which like Leaven puff up the Mass of Blood) the Blood becomes more turgid in its Vessels than ordinary, and since through the defect of Air or fanning, the Natural Circulation is too much streightened, the imprisoned Blood breaks out where ere it finds a passage through the Arteries, and being Extravasated begets a swelling or hardness, which causeth an extraordinary Heat and Pain; hence the motion of the Blood is more disturbed, and the Fever at first grows more troublesome.

A *Putrid Essential Synochus* he divides, first into a *Putrid*, then into a *Causus*, or *Burning Fever*, as also into a *Quotidian*, *Tertian* or *Quartan*.

The Nature or Essence of a *Causus*, or *Burning Fever* (which finisheth its Period or Natural Course with a greater Heat, and a most intolerable Thirst, and other Symptoms that argue a greater Inflammation of the Blood) in the Sense of our Author consists in this, That the Blood in this case is hotter, that is, more impregnated with a sort of Combustible Sulphur, and therefore when it waxes hot, the Inflammation is greater, and becomes more Universal through the Body; thence also its Motion is Acute, and soon arrives to its height, the Symptoms are more vehement, the *Crisis* more difficult, and the Event more dangerous. As to the Fits or Periods in which a Putrid Fever at a certain time sometimes encreaseth, and like an intermittent returns sometimes every day, sometimes every third day, or every fourth day,

our Author here proposeth his Opinion, and presupposeth two principal things, which for the most part raise that Effervescency, or boiling up of the Blood. First, the Exaltation and Firing of the Sulphureous Part in the Blood. Secondly, a gathering together of that adust Matter that remains after that Firing, even to a Degree of Turgescency: From the first he derives the Continuity of the Fever, from the other the height and *Crisis* of it: and to these he adds a third (*viz.*) a Fulness and Turgescency of a Crude sort of Juices from Food lately taken, which in a Continual Fever causeth a greater Effervescency.

In a *Putrid Fever* that is very Acute, the whole Mass of the Blood, as he saith, is soon Enflamed, and in the greatest heat imaginable, whatsoever Nourishing Juice is added is Consumed by the Fire, so that little or nothing remains in the Mass of Blood, towards the next Fit. According then to the greater or lesser Inflammation of the Blood, and the Addition of Crude Juice, the Fever is either Stronger, or Milder. In every Fit he supposeth something of the adust Matter of the Blood, doth evaporate besides that Stock of degenerated Juice.

As to the return of the Fit every day, or every other day, that depends, in the sense of the Author, upon the various disorder of the Blood; hence that *Succus Nutritius* degenerated, ariseth sooner or later to a Degree of Turgescency, and therefore by its Effervescency, it produceth oftner, or seldomer Fits in this Fever.

§. 7.

Sylvius distinguisheth the *Synochal* Fevers in respect of their different cause, into *Bilious* or *Lymphatick*, and by *Lympha* doth not only understand that Matter which goes from the Globular Glandules to the Heart, but also the Pancreatick Juice, and the very *Saliva*, or Spittle proceeding from the foresaid Glandules, and moisture of the Intestines, and all other Humors that mix with the Blood in its Circulation; and these Fevers he divides into *Lymphatick*, *Glandular*, *Pancreatick* and *Salival*. From Bile or Choler he chiefly derives all Burning Fevers, especially a *Causus*, from the Glandulous *Lympha* he derives all Fevers that are accompanied with the more vehement Pains of the Head and Joynts, as from the Pancreatick Juice, those that are accompanied with Pains of the Belly, from the *Saliva* or Spittle, those that are Accompanied with great Disturbance, and Stretchings of the Stomach, and other parts. Where then the Heat is sharper, as in a *Causus*, the Pulse quicker, the Urine thicker, and of a deep Dye, the Thirst Intolerable, the Tongue dry, and Cleft, and sometimes Black, he saith the Bile or Choler is Corrupted with a certain Lixivious Acrimony, or with too Oily a Substance. But if the Fever hath also a gnawing Heat joyned with it, then he Ascribes it to the sharper or more Acid *Lympha* of all the Globular Glandules, or of most.

The Difference of these Fevers, is taken from the Vehemence of their Symptoms, and is reduced to four.

They are the *Causus* or *Burning Fever*, and the rest which invade the Patient with Inflammation, Burning and Redness.

As for those Melting Delirious Fevers, and the more Malignant ones, we shall Treat of them in their own order.

The Primary or Principal Cause of these *Synochal* Fevers, which torment the Sick with a continual and mighty Heat, is the Bile or Choler grown too Sharp or Oily, whence riseth not only a greater Effervescency in the right Ventricle of the Heart, but also in the lesser Intestine, the Pancreatick Juice not a little contributing thereto, especially being sowed with its Stagnation, &c as it were producing a sort of a Fit. For he looks on the *Lympha* as the Primary cause of those Fevers, that make their assault with continual Cold, and shaking, but especially the Pancreatick Juice, when debauch'd with a certain Acid sharpness, which stirreth up those Acid Vapours from the *Tenue Intestinum* in order to a new Fit, and raiseth a wandring Chilness through the whole Body.

§. 8.

My own Opinion is, that when there is any Obstruction in any Principal or publick Part, so as to cause an Inflammation, a Fever naturally follows, which if it constantly remains, is to be Stiled *Continual*, if it admits of any Truce, is to be called *Intermittent*. The Cause of a true Burning Fever, or *Causus*, is taken from a certain corrupt Humour, whose Pores are truly opposite to those

of

of the Blood, which Humor proceeds either from the Perspiration being Violated, ill Air, or excess of Strong Liquors; from which Causes there arises so great a Conflict, and dispute betwixt the Volatil and Oily Salt, and Acid, with so great a Heat, and almost intolerable Thirst, that in this our Natural Kingdom, nothing but a certain Anarchy, and Confusion of the Animal Spirits remaineth for a while. Therefore a *Continual Intermittent Fever*, *Quotidian*, *Tertian*, or *Quartan* ariseth, when, from the solid Parts, some *Heterogeneous* Humour Gross Salts, and nitro-sulphureous Particles invading the Mass of Blood, destroy its Symmetry; these ruder Particles, as I have said, which are either contained in the *Serum* or *Lympha*, Chyle, or Pancreatick Juice, or in the *Saliva* or Mass of Blood, are so jumbled together, that the whole Mass is put into such an Extravagant Fermentation, that it is a great while before it returns to its Peaceable and more Regular Motion: and so while this Offensive Humour, impregnated with these Particles, is communicated to the Blood, it is necessary a *Continual Fever* should follow. But when this Corrupt Humor, or Disproportion'd, or Anomalous Particles (whose Residence for the most part is in the Chyle) at certain set times, as it were by Surprise, invade the Purple Mass; then there ariseth an Intermittent Fever, and thus we include the Combat of the Acid depraved, with the Alcalick Particles.

And according to the Distinction, it is here to be observed, That a *Continual Tertian*, for the most

part, begins with Shaking, but the *Quotidian* not so; the *Quartan* after the Fit, leaves behind it Universal Pains, and so these Fevers are to be distinguished from one another in the beginning.

A *Continual Quotidian Fever* ariseth from the Crude, and more indigested Particles in the Chyle, or from certain Wild Salts or Fermenting Reliques, which lurking about the Milky Vessels, or Glands of the Mesentery, and communicated to the Blood, do easily cause an Effervescency. The Phlegm is not here to be blamed, since I have known many *Continual Quotidians*, which have sprung from Choleric and Sulphureous Particles, which the Symptoms that attend it, make good: which sort of Fevers often happen, and succeed *Tertians*; besides, the Reciprocal turn of a *Tertian* into a *Quartan*, or a *Quartan* into a *Tertian*, the same Symptoms still remaining, shews they both are derived from the same Humor. In a *Continual Tertian*, the Effervescency of the Blood is greater, because there is a greater obstruction the Vessels, and the Ferment therein contained is more active; in a *Quartan* the Effervescency is lesser and milder, because produced from Colder, and more Sluggish Particles.

There may be also *Quintans*, *Sextans*, *Septans*, *Octans*, and even *Nonans*, according to the greater or lesser Irregularity of the Blood: The Pains of the Head, that usually Occur in these Fevers, proceed from the Grosser Particles imprisoned betwixt the Brain and its Membranes, which by their Acrimony or Sharpness, pulling and vexing

vexing the Nerves, cause those Pains. As for the other Symptoms usual in these Fevers, we shall unfold them in our following Discourse.

§. 9. Prognostick.

THE Prognostick Signs shew us, That all Burning Fevers are dangerous, because the Fever is Continual and Acute. Burning Fevers arrive at their *Crisis* the fourteenth day, either by destroying or freeing the Patient; a weak Pulse is but the sign of a doubtful Event; for the Remoter it is from its natural, and usual stroke, the more dangerous it is.

The *Autumnal Continual Fevers*, are more dangerous than the *Vernal*, for in these you must always Purge for fear of a Relapse, in the other you must abstain; for the very Air supplies the defect of Medicines. According to *Galen's* opinion (*Comment on Aphor. 14.*) This Disease proves Mortal to Old Men. If the Urine is thick and without Sediment, it sheweth a great disorder in the Blood, the redder and thinner the Urine is, so much the worse.

When a *Continual Quotidian Fever* is great and slow, 'tis not without Danger, for it threatneth a *Hectick*.

And the *Continual Quartan Fever*, tho it happens very seldom, yet is dangerous enough and very Weak'ning, and at last from its long Continuance generateth a *Droopy*.

§. 10. Dietetick Cure.

IN the most Acute Fevers, whose *Crisis* is in the space of four days, the most slender Diet is most necessary by reason of the Extream Immediate Pains, and the great Violence the Blood and Animal Spirits are under. For Meat, altho it contributes to Preservation, yet it removes not the Cause of the Fevers, according to that usual Maxim, *Impure Bodies, the more you Nourish them, the more you Hurt them.* Hipp. 2. Aph. 10. Therefore they are much out, who are always loading the Patient with Meat, since they only hasten their Destruction; and let a Physician prescribe what he will, or forbid what he will, nevertheless in this they are Arbitrary, according to the common saying: *They Live as they will, are Cured as they please, and Dye as they ought.*

For the Stomach by reason of the want of Animal Spirits, & great disorder that attends the Fever, grows Infirm and Weak, and therefore performs not well the Work of Digestion, but rather by Crude and Corrupt Matter affords Nourishment to the Fever. Hence, *Hippocrates* 7. Aph. 1. 15. *If any one gives Meat to one in a Fever, what would be Nourishment to him in Health, advanceth the Distemper when he is Sick.* Therefore at the approach of a Fever, we hold Abstinence mighty necessary. Hipp. 1. 3. in his Discourse of Diet saith, If a Fever assaults one that is Plethorick, if you afford the Patient nothing but Water for three days, the

the third Day the Fever will go off, if not, you must use a Ptiſan, and the fourth or ſeventh Day the Fever will leave him, eſpecially if he ſhall ſweat. Therefore let thoſe that are Sick of a Fever, abſtain from Fleſh, and let them rather take thin, cooling Broths; let their Drink be Small-Beer, Barly-water or Tamarind and Sorel Whey, or a Decoction of Harts-Horn with Sorel Roots; but in their uſual Drink let there be put ſome Drops of the ſublimated Spirit of Salt dulcified, or of Salt of Nitre: Juleps with the Dulcified Spirit of Nitre are very proper: and, as occaſion ſerves, a little Wine and Water may be allowed.

A Cooler Air is here to be choſen, which if Nature denies, let Art ſome way or other ſupply, and to ſecure the due Perſpiration of the Body, let the Patient be well Guarded with Light Cloths: A hot Sultry Air is bad, as alſo the Night Air. In theſe *Continual Fevers*, let them abſtain at firſt from immoderate Sleep. Keep the Body open, and the Mind at eaſe; for all the Paſſions of the Mind are to be laid aſide, eſpecially Sadneſs and Anger; and great care is to be had as to all thoſe things we call not Natural, for Care is to be taken that what Nature endeavours to caſt off as an uſeleſs Burden, be not retained, unleſs there be an immoderate Evacuation (that Weakens the ſtrength) which is to be hindred, and all Vehement Perturbations are to be avoided.

§. II. Pharmaceutick Cure.

THE Old Galeniſts preſently in the beginning of Fevers, fly to Phlebotomy, as to a certain Refuge, becauſe, as they ſay, it doth not leſſen the plenitude or fullneſs of the Veſſels, or diminifheth the ſtrength, of the Patient, but it cools the whole Body, preſerveth a due Perſpiration, and keepeth off Putrefaction: The Ancients uſually bled their Patients even to a degree of Fainting, but the more prudent of them, thought the Repetition of Phlebotomy at ſeveral times more proper, giving a Clyſter before. The Galeniſts alſo adviſe that the Patient Bleed ſo often till the moſt Corrupt Blood appeareth, and inſtead of Breathing a Vein they make uſe of Cupping, Glaſſes and Scarifying, where the Patient is Weak, as in thoſe Fainting Fevers, or where the Age admits not of the other way.

Their Pharmaceutick Remedies are either thoſe that are Evacuating, or thoſe that are altering: under Evacuating Medicines, they comprehend all Emeticks, Sudorificks, and Diureticks: under the Alteratives they include all thoſe Medicines that Cut, Cool, Open or Comfort. As to Purging Medicines, they are not to be given in the beginning, unleſs the Morbiſick Matter grows troubleſome, and bulky, by which the Fever increaſeth, which is eaſily diſcovered, by Nauſeouſneſs, Thirſt, Heart-ake, Bitterneſs in the Mouth, or Flux of the Belly, and other Symptoms, in which reſpect ſometimes a Purge is given before Bleeding; but the Purgers ought to be of the

the milder sort, as *Cassia*, *Manna*, *Tamarinds*, *Tamarind-Whey*, *Diaprunum*, Syrup of *Roses*, solutive of which they compose certain Forms, which you may see among the Ancient Practitioners.

And if Nature endeavours to sling off the Morbifick Matter the upper Way, which the Physician may easily guess from the Nauseousness and Vomiting, then they advise Vomits, for they say it hath often happ'ned, That by a Vomit in the Beginning, the Fever hath been removed, which otherwise might have long continued: but they prescribe in this Case the Milder sort of Vomits; as for Example; Barly-Water luke-warm, with the Oyl of sweet Almonds, or the Common Decoction, with the Seeds of Dill or Rhadish, to the Quantity of a Pint, for under that Quantity, they are apt to remain in the Stomach.

In the whole Course of this Disease they Prescribe Glysters every Day, especially if the Body be not open, which may be Compos'd of Coolers and Mollifiers.

After Bleeding, and the Cleansing of the first or upper Passages, the Preparing Medicines or Digestives are advis'd, which both mitigate the Heat, prevent Putrefaction, and open Obstructions; such as are Juleps, Cooling Broths, and Emulsions. In Cholera or Bile that is Sharp and Thin, they recommend Acids us'd in Juleps, in the Progress or Advance of the Fever. Where Concoction or Digestion of the Humors is Apparent, they make up of a Decoction of *Asparagus* Roots, and Liquorice, the Leaves of Agrimony, and Pimpernel.

In lasting Fevers that rise from the more Stubborn Obstructions, they recommend a Decoction of Ground-Ivy, or Succory, or Chamomill.

The Ancients also allow a large Draught of Cold Water in Putrid Fevers, in which the wiser part of them are very Cautious; yet in a mighty Burning Heat, they allow even a Pint of Cold Water, with some Drops of the Spirit of Vitriol. To recover Strength, they recommend several Cool Strengtheners, to which they add the Powder of Pearl, or Harts-horn, *Diamargaritum Frigidum*, *Diatrius Santaloy*, *Diarrhodon Abbatis*, Confection of Alkermes or Hyacinth; for the Forms of which I remit my Reader to the foregoing Practitioners. In the Turgescency of the Matter, and Declension of the Disease, they fly to stronger Purgers, as Rhubarb, Agarick, or Mechoachan; and if the Fever continues, they repeat their Purges, adding Preparatives between, till at last the whole Mine or Seed of the Disease be Exterminated.

After Purging, if Nature seems to derive the Morbifick Matter, through the Ureters or passage of the Urine, they assist her with Diureticks, for which end they Prescribe Emulsions, and the Roots of Fenil and Parsly to be boyled in Broths; but if they observe Nature endeavouring to cast off the Enemy through the Pores of the Body, they propose moderate Sudorificks, as *Carduus* or Fumitory-water; for they say, to moderate the Feverish Heat of the Body, and to strengthen the Vitals or principal Faculties, 'tis necessary the Pores of the Body be open.

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and that the Filth be carried off that Way; to which end they outwardly apply certain Remedies, Epithems and Balsams to the Heart, and Liver, and other parts, which they either prescribe in the Height of the Fever, or in its Abatement, whilst the Heat diffuseth it self to the outward parts, not in the Beginning or Increase of the Disease, much less at the approach of the *Crisis*: In the Extraordinary Heat they apply several Coolers to the Feet, the Testicles and Hands.

§. 12.

THE *Paracelsists* in the Beginning of these Fevers, recommend a Vomit of Antimony, then they give *Laudanum Opiatum Paracelsi* from two Grains to three in Worm-wood-water; they commend also the Spirit of Salt Rectified to one or two Grains, in Succory-water, & many other things, which you shall find afterwards.

§. 13.

Helmont, with his Leader *Paracelsus*, brings many Reasons against the *Galenists*, as to Bleeding, which, they contend ought in these Fevers to be omitted; for *Helmont* Glories that he hath cured many Fevers without Bleeding, granting the Patient Wine also; nay, he saith more, that he who cureth not a Fever within four Days, is unworthy of the Name of a Physician, and the Remedy here made use of is a Sudorifick, (*viz.*) Diaphoretick Mercury, which cutteth, resolveth, and carrieth off the occasional Cause thereof wheresoever it be, and performs sometimes without

Sweat. The other Remedies, as we said before, were composed of Cephalicks, Marjoram, and Rosemary, which are not Alkali's, but Volatil's, containing the Constitution of Simples; these are the moderate Diureticks, which in Intermittent Fevers, are to be given, the Stomach being empty, just before the Fit; in Continual Fevers, at any other time. For *Helmont*, in the Cure of Fevers, doth not only regard the Occasional Cause, but the Excellencies and Disturbance of the *Archæus*, which being Appeased, the Fever ceaseth, the rest he leaveth to the Work of Nature, which (Generally Speaking, is its own Preserver: He allows also a little Beer, mixt with a little Wine and Bread for Humectation or Moistening, but as for Rich Pearl and Golden Cordials, he rejects them as not agreeable to our Spirits. But *Helmont's* chief Intention of curing Fevers is by Sweat, for the *Archæus* with its own Passion is Enflamed, and produceth a hot Sweat, and so hints to the Physician, which way the Fever is to be carried off, (*viz.*) by Diaphoreticks.

§ 14.

Wills in the Cure of Putrid Fevers hath four General Intentions; First, That the Blood be cleared from that Sulphureous Inflammation it labours under; Secondly, That the Blood enflamed, may burn out with the less danger; Thirdly, That the Inflammation being over, the Blood be restored to its Natural Temper; Fourthly, That a speedy Care be taken of the Symptoms.

At the first Siezing of this Distemper,

temper, the whole Business consists in suppressing the Fever, or stopping the Inflammation of the Sulphur, to which end he adviseth Bleeding; for thus the Blood is Cooled, and the more troublesome Particles are Dissipated, as you see in Hay that is like to take Fire, if it be exposed to the Air it is preserved. He adviseth also that the first Region be Cleansed: and for this end he commends Glysters, sometimes Purgers, and the milder sort of Vomits, which being seasonably administered, remove the Fever at the first. If notwithstanding all this the Fever perseveres, Care must be taken that the Deflagration of the Residuous Sulphureous Matter be performed with as little Tumult as may be. When the Acute Fever, according to this Author, is in its encrease, with a strong Pulse, accompanied with Watchfulness, *Delirium's*, or Head-achs, Bleeding again is proper, that a free Transpiration may be maintained; Glysters also in this Case are safely given, and laying aside Purgers, or Diaphoreticks, rather use Opiates and Anodynes, which may appease the Blood, and fix the Spirits: For that end this Author Commends Juleps and Decoctions or Broths, which cool the Burning Entrails. Things that temper the Blood, and comfort the Spirits, are to be given often: but for your Hot-waters or Spirits, Bezoardick and Cordial Powders, where there's no Malignity in the Fever, they are to be shun'd as extremely dangerous. If the Fever is come to its Height, wait diligently for the *Crisis*, suspending all things in the mean while, neither Bleeding nor Purging. After the heat of the Fever

is a little over, and the Signs of Concoction appear in the Urine, and that Nature is yet but slow in its *Crisis*, then you are to promote by some gentle Purge or Sudorifick: but if all things are yet Crude, and without Sediment, there is decay of Strength; and Purging or Sweating is not to be allowed of without danger of Life. But in this case Nature is to be supported with moderate Cordials, the Extravagant Effervescency of the Blood is to be prevented, and a due Fermentation preserved, which is best done with Powder of Coral and Pearl.

As for the Symptoms, especially the most Violent, he hath very fit and appropriated Medicines, which the Courteous Reader may meet with in his Treatise of Fevers; he may Consult also the Writings of other Practitioners, especially *Johnston's Syntagma Practicum*.

§. 15.

SPIBUS in these Putrid Fevers allows of Bleeding in the Beginning, yet chiefly when the Burning is most; but when there appeareth any Sign of a troublesome Acids, he adviseth Sudorificks, especially the pleasanter Aromaticks and Volatil Salts; and when the Bile or Choler grows troublesome, he orders Purging or Vomiting, and in a seasonable time he adviseth some De oppilatives, which may open the Obstructions in the passage of the *Pancreas*, and correct its Juice, which sort of Prescriptions you may meet with every where.

§. 16.

BUT ^{we} advise, in these Putrid Fevers, to do what is to be done speedily, Purging, and Bleeding the first or second day; but when Malignant Symptoms appear at first, as they often do, for Reputations sake, you must be very Cautious. Amongst Purgers, your Infusions are excellent; also Vomits may be safely given in the Beginning, which often prevent worse Symptoms: But in softer and more delicate Constitutions Glysters, in the Beginning, of Mollifying, and Febrifuge Ingredients are more safe; in Old Men, as also at the approach of the *Crisis*, and in the Declining of the Disease, they are not so proper.

When therefore the Physician is called at the Beginning of the Disease, if the Patient be not Weak, let him first Bleed, then gently purge, and immediately after that, administer some powerful Sudorifick, and thus the Physician will hardly ever miss his Aim.

If there be a Sharpness or Acrimony joyned with the Fever, you may however safely Bleed, and after Bleeding give some Sudorifick; but if the Patient grows Weak after Bleeding, administer a Cordial, and then let him Sweat two or three Hours; those that immediately Fly to the use of Cordials, bring the Patient in great danger of his Life. For the Cleansing of the first Region (which whether it be convenient or no, you may guess by Nauseousness and Vomiting,) the following Infusion will be very proper.

Take of the Leaves of *Senna* two Drachms, Seeds of Fenil, of *Siler Montan.* of each half a Drachm, Small-Beer not old four Ounces, let them stand a Night, and strain them in the Morning for a Dose. Or,

Take of an Infusion of Rhubarb, two Drachms and a half, in a sufficient Quantity of Succory and Dandelion-water. Or,

Take of the Tamarind Claret of *Myns.* three Ounces. Or,

Take Smallage-root one Ounce, Tamarinds an Ounce and a half, boyl them in a sufficient Quantity of Fountain-water, adding towards the end, of the Leaves of *Senna* half a Drachm, Seeds of Bastard Lovage one Drachm. In Twenty Ounces of the Colature dissolve of the Syrup of Succory with Rhubarb two Ounces. Mix it, and at one Dose, give to the Patient from two to four Ounces. Or, you may give the Extract call'd *Diacarthamum*, or *Diacitrum*, if the Nature of the Patient will bear it.

And at the Beginning a Vomit of Antimony may be given with safety, the Emetick Syrup to six Drachms, or white Vitriol to half a Drachm, or Emetick Tartar to two or three Grains, *Crocus Metallorum* Absynthiated two Grains. Such Prescriptions as these you may frequently meet amongst the Practical Authors: All acid Mineral Spirits are of the Family of Alteratives. Sudorificks are the safest Medicaments; amongst which Dr. *Michael's* Bezoardick Tincture is excellent, as also *Mixtura de Tribus*

bus, Spirit of Harts-horn, Soot, and all Volatil Salts. But let the Physician take care he mistakes not a Burning Fever, for a Malignant one, or a Malignant one for a Burning one; therefore in the Beginning we may give Milder Cordials, as we do in other Fevers; for a Malignant Fever in the Beginning is often like a *Causus* or Burning Fever. Therefore care must be taken to know, whether or no it be Malignant, which we may easily guess it to be, if they are at that time very common, and especially if the Patient complains of heaviness of Heart, and weakness, and other severe Symptoms. There is no certain sign of Malignity to be learnt from the Urine, nor from the Pulse, therefore the Signs are to be considered all together or Conjunctly. To oblige the younger Practitioners I will add some Sudorifick prescriptions.

Take of the Magistery of Harts-horn, the Back-bone of Vipers of each one Scruple, *Bezoard Solar*. half a Scruple. Mix them, and divide them into two equal parts, for two several Doses.

Take of the Spirit of Harts-horn, Water of *Antimonium Diaphoreticum* of each one Scruple, Salt of Vipers six Grains, divide it into two equal parts, for two several Doses.

In a *Causus* or Burning Fever, I take to be very profitable Diaphoretick Powders not too hot, of *Antimonium Diaphoreticum*, *Bezoard Mineral*. of Gold, Silver, or Tin, prepared Pearls or Crabs-eyes, *Sal Prunellæ*, or Tartar Vitriola-

ted with the Addition of a little Camphore.

The Alteratives that are particularly, or more specifically convenient in a *Causus*, are Whey, or the Distilled Water of Whey, *Nitrum Tabulatum*, *Tinctura Corroborans Cardamomifata*, Tincture of Daizies, Violets or Roses, of which some Drops are always to be put in their usual Drink to remove Wind, and Obstructions. To comfort the Pores and other Vessels, those Alteratives that are partly Cordial, are proper; as the usual Cordial Waters, Confection of Hyacinth, *Sal Perlatum*, *Corallizatum*, and the like.

In this Case also outward Medicines are to be applied sometimes to the Liver, sometimes to the Back; as the Cooling Oynment of *Galen*, *Unguentum Resaceum Mesues*.

In a Continual Quotidian Fever instead of a Digestive, there is nothing comparable to the *Facula* of the Root of *Arium*, the Stomachical Powder of *Birchman*. For Purges, *Pill. Panchymagog.* and *Phlegmagog.* are best.

For the removing Obstructions and to correct, and throw out the ruder Salts, the Febrifuge Salt of *Mynsicht*, and the Flowers of *Sal Ammoniac* are very proper, likewise my own Febrifuge Tincture, which you have in the following Composition.

Take of *Extract Theriacal*. Wormwood, the lesser Centaury, Gentian of each a Drachm, Jesuits Bark half an Ounce, to which add the Volatil Spirit of *Sal Ammoniac* a sufficient Quantity. The Dose is from twenty Drops to forty. Or,

Ddd 3 Take

Take of the Febrifuge Elixir half an Ounce, the Dose is forty Drops. Or,

Take of Vitriolated Tartar two Scruples, Salt of Worm-wood, Centaury, Mineral Gold of each a Scruple, divide it into four equal parts.

The Essence of Worm-wood, and the Febrifuge Elixir in respect they are good against a Cachexy or ill Habit of Body, ought to be taken every Day, and in this Sence also *Vinum Absinthium*, *Chamedritum*, &c. are very good, or the Essence of Worm-wood dropp'd in the Patients usual Drink. So also the Spirit of Vitriol, of Copper, *Pentus's* sweet opening Spirit of Salt, may be dropped into Beer to give it a pleasant tast. If the Patient be subject to Swooning give the Tincture of Coral, with the Cordial-Water of a Stag's Heart of *Mynsicht*, &c.

In a *Continual Tertian* in your Alteratives add always some Acid, as the Spirits above-named, that they may pierce the deeper, and take away Thirst: but here you are to observe, That the Spirit of Nitre is not to be mingled with the Spirit of Salt, because they will raise a Fermentation. The double Secret of *Mynsicht* is very good also. In this Fever I have likewise a particular Preparation of Tin. Camphore in this Case is very useful.

Take of the Stomachical Specifick of *Poterius* a Scruple, Harts-horn prepared without Fire, prepar'd Ivory of each half a Drachm, Camphore two Grains.

Divide them into two equal parts.

Diureticks are also profitable. The Tincture of the Flowers of *St. Johns-Wort*, Blew-bottle and *Calceatrippa* may be given to a Drachm, the compound Spirit of Salt to fifty Drops at a Dose.

Take of *Bezoard. Mineral.* half a Scruple, Water of *Cardus Benedictus* three Ounces, Syrup of *Cardus Benedictus* two Drachms. Mix them. If the Patient be Weak,

Take of *Aq. Comfortat.* an Ounce and a half, Saffron and Camphore of each three Grains, sweet Spirit of Salt six drops, Syrup of the juice of Citron three Drachms. Mix it for one Dose.

In a *Continual Quartan* rather abstain from Bleeding. The Purgers that are most proper, are, *Extract. Melanagog.* The Tartareous Pills of *Quercetan*, or of Gum Ammoniack, an Infusion of Fumitory, Oxymel, and Purging Ellebor. For Sudorificks, Fumitory, *Cardus Benedictus*, *Guaiacum*-wood, and Sassafras are most convenient. The Water or Spirit of *Sal Ammoniac*, or also the Flowers of it, and also Preparations of Steel are very profitable; and amongst these particularly the Cachectick Powder of *Quercetan*, my Febrifuge Tincture. These are Prescriptions.

Take of the Cachectick Powder of *Quercetan* three Drachms, Confection of Alkermes one Drachm. Mix them. Take *Arcanum Tartaris.* leafed Earth of each a Drachm. The Dose

is thirty, or forty drops.

Care also is to be had of the Symptoms that attend these Fevers, such as Looseness, Watchings, Thirst, and other things that vex the Animal Spirits, which I shall Treat of below. It very often happens that notwithstanding the Fever be gone, the strength of the Patient is so worn out, that there followeth a great Weakness, in which Case Sydenham doth with great reason advise the applying a

young Youth to the Patients Bedly, and by his own Experience Witnesseeth, that many have recovered their Strength by that means. As for the rest it may easily be Collected from what either hath, or may be mentioned hereafter. Preserve the Strength by inward Medicines, but above all, the following Mixtures are very proper.

Take the usual Pearl-Waters, &c. and other temperate Cordial Powders.

Ddd 4 CHAP.

CHAP. IV.

Of the Slow Heſtick Fever, the Colliquative or Melting, and the Lymphatick or Catarrhus Fever.

§. I.

AS for theſe Fevers, in reſpect they are derived from one Cauſe, I ſhall Treat of them in the ſame Chapter, excluding hence all Subtil and Scholaſtick Diſtinctions, which the Practical Phyſician hath no uſe of.

Paracellſus calleth the *Heſtick* Fever *Targam* and *Aridura*; And it is commonly deſcribed to be, A Continual Diſeaſe, that takes its Riſe from the Fermentation of the Blood depraved, aſſaulting the Patient with a ſmall quick Pulſe, and ſharp Heat, eſpecially after Meals, not without a Manifeſt Conſumption of the Body. The *Heſtick* Fever, that is *Habitual*, is for the moſt part Continual, and yet admits of the ſame ſort of Fits after Meals, with a moderate, but Extraordinary ſharp Heat, ſometimes with a previous ſhaking, but oftner without it, by which the whole Body grows mighty Lean, and is very much conſumed.

This Fever, according to Phyſicians, hath three Degrees: In the firſt Degree there is a ſmall Alteration, with a Conſumption of the Body, which is hardly perceived, ei-

ther by Patient or Phyſician, and ſo oftentimes the true Season of curing is loſt.

In the ſecond Degree, the Conſumption of the Body is more manifeſt, with a greater Heat, eſpecially an Hour or two after Eating, which ſhews it ſelf chiefly in the Cheeks, and Palms of the Hands.

In the third Degree, the Body is ſo Extenuated, that the Hippocratical Face appears, and the Bones are hardly covered with ſkin, with an Oyly Urine, Faint Sweats by Night, Continual, or, as they call it, Habitual Heat. Which Degree of a *Heſtick* is that which is called a *Marasmodies*, or *Tabes*.

The *Colliquative* or *Melting* Fever is alſo referr'd to the Species of a *Continual* Fever, in which the Body is extremely Extenuated and Lean, ſo that in a ſhort time nothing but Skin and Bones appear. Of this ſort alſo is that Fever which is called a *Sweating* Fever, becauſe the Body doth conſtantly and even exceſſively Sweat; ſo that it is in a manner dryed up and extraordinary Weak. A *Heſtick* Fever is alſo divided into a *Primary* *Heſtick*, which diſcovers it ſelf from the Beginning; and a *Secondary* one, which ſucceeds other Fevers; alſo into a *Solitar*

litary and Simple Hectick; or it is joyned with a Putrid Fever, and so it is complicated: Again the difference is in respect of the Place, the Subject, and the Cause; and in General it comes from the Consumption, Corruption or Inflammation of this or that part, or from this or that Disease.

§. 2. Part affected.

THE Ancients placed this Fever in the Solid parts, some making the Heart its first and adequate Subject, or rather the Solid Parts of the Heart, which parts grow dry, and are more, or less Irritated, according to a good or bad Sanguification, and so consequently the Body is well, or ill Nourished: The Solid parts are said to be the Subject of this Fever, in respect the effects of it, (*viz.*) Consumption and Leanness more evidently appear in those Solid, and Fleishy parts; when in the mean time the Distemper lyeth hid in the Mass of Blood, the *Serum* thereof being wholly wasted, and Communicating a certain Acrimony to the foresaid Mass, whence it acquires a sharp and Fermentative Intemperature: thence cometh the Hectick Fever, tho' *Helmont* maketh the Stomach the seat of this Disease, as well as of many others.

§. 3. Diagnostick.

THE Signs are expressed before, for the more usual are these; (*viz.*) a quick, frequent Pulse, and every day lesser, a watchful kind of Drowsiness, a Pain in the Head and through the whole Body, a soft slow Fever, and violent Heat

in all the parts, the Eyes of the Patient are heavy, and he is extremely Thirsty, with a dry, small Cough; he is also Drowzy, and often Morose: The Urine for the most part is as it should be, but in length of time it hath a certain Oyl swimming on the Top, which is not the Fatness of the Solid Parts, as some think, but certain Oily Particles inherent in the Mass of Blood, and with the *Serum*, according to the rule of Circulation, transmitted to the Urinary Vessels. As for Appetite and Sleep, those that are Sick of this Disease, have them indifferently well, they Spit not much, nor is their Cough very moist, and they daily grow Leaner and Leaner, and after Eating are always Feverish, & Red in the Cheeks. They are for the most part troubled mightily with Night-Sweats, which dissolves their Spirits, and melteth away their strength; whence ensueth Naturally a wearing away of the whole Body, with a wonderful pale lean Face.

The Pathognomick Signs are these three following. First, That the Disease is constant, and so by Consequence continually preying upon the Vitals.

Secondly, That the Body, and more especially the solid parts thereof are Consumed.

Thirdly, That an hour or two after Eating, the Feverish Heat encreaseth even to a Degree of a Fit: the pain of the Head and burning proceed from Obstructions, and either because, by the Excessive Heat of the Fever, the blood grows sharper, or that an Inflammation ariseth perhaps in some ignoble Part, when Fevers are not well Cured, which Inflammation being suppurated

rated, and mixing with the Blood, fowres the whole Mafs. Sometimes after an imperfect Cure, or perhaps the ufe of Cold Medicines, the ftrength of the Patient is wholly decayed. After Eating the Fever increafeth, becaufe of Freſh and New Matter being Communicated to the Blood in the Nature of Chyle.

§. 14.

AND now we have Treated a little of the Signs or Symptoms of this Diſeaſe, it is neceſſary we ſay ſomething of its Cauſes, which before we proceed any further, to go Methodically to Work, we ſhall propoſe according to the Sentiments of the *Galenists*, who divide them into *Next* and *Immediate*, or *Remote* and *Mediate*.

To the Outward Cauſe they refer all thoſe things, which are apt to raiſe other Fevers; ſuch as are the Heat of the Sun or Fire, too much and too violent Motion, Exceſſive Watchings, Grief and other Paſſions of the Mind; alſo Extraordinary Evacuations; as a Loosneſs, Dyſentery, or Bloody-Flux, *Choleſta*, Spitting of Blood, &c. and laſtly, Hunger or want of Food in dry Bodies, or Sharp, Hot and Putrid Meats and Drinks, and many other ſuch things, which, (as they ſay) deſtroy and devour the Radical Moiſture.

The Inward and Nearer Cauſes, are the Inflammation of the Entrails, Burning, Peſtilential, and long Fevers, Ulcers in all the *Viſcera* proceeding from the Venereal Diſtemper, or from the Scurvy, all which are ſufficient to cauſe a ſlow, & Heftick Fever. So *Galen* ſaith he ſaw

a Heftick which took its Riſe from the Inflammation of the *Septum Tranſverſum*, &c. no leſs do the Modern Practitioners aſcribe the Cauſe of an Heftick to the Corruption of the Liver, for they ſay there is a certain Filth that is ſometimes Generated in the Liver, which corrupts even the ſubſtance of it, and Transmitting its Filth by Circulation to the Heart, in a manner ſets it on Fire.

Sometimes they aſcribe an Heftick Fever, only to Obſtructions in this or that Inteſtine, which hinder the paſſage of the Chyle, and prevent the due ſeparation of Humours.

§. 5.

THE *Chemiſts* hold that this Fever proceeds from the Sulphureous Spirits, being Enflamed or Kindled in the Heart, which, as their Maſter ſaith, is over in a Months time.

§. 6.

Helmont ſaith, that in a *Continual* conſtant Heftick, the Spirits are diverted from the Office of Diſteſtion, ſo that what is but in a manner half Digefteſt, becomes Corrupted. He is ſatisfied alſo, that the Conſumption comes from the Obſtruction, and Corruption of the Innate ſtrength, as alſo from a ſharp Filth; which he hath obſerved in a Sedentary Life.

§. 7. Wil-

§. 7.

WHUS doth not derive this Fever from any Obſtructions in the Liver, Spleen, or Meſentery, that may hinder Diſteſtion, but rather from an ill Conſtitution of the Blood, which being grown too ſharp or ſowre, is Prejudicial to Nouriſhment, and a juſt Circulation: For he ſuppoſeth the Blood in the Heart, like Oyl in the Lamp, which if it aboundeth with too Salt Particles, it Burns not ſoftly nor pleaſantly, but crackles and waſts away ſtrangely, giving but a Weak and Faint Light. Our famous Author opened one that Dyed of this Diſeaſe, and found all his Entrails and other Veſſels very ſound, except the Lungs, which were grown dry, and ſtuffed with a Sandy Matter, not unlike Chalk. So alſo in this Diſeaſe the Meſentery or its Glandules are ſtuffed up with a Clayiſh ſort of Matter; Now whether the Blood becomes thus Salt through the Entrails being obſtructed, and permitting only the Watry Part of the Chyle to paſs thorow them, or whether they are Prejudiced by the paſſage of a Salt Blood, our Author doubts, and is probably perſwaded they equally offend each other. Therefore if this Diſtemper proceeds from an Ulcer or Apoſtem in any Part whatſoever, a Fever is the neceſſary Concomitant, thence he derives a Continual Fever, and Depravation of the Nouriſhment.

§. 8.

SPIGHIUS hath often obſerved theſe Heſtick Fevers only to riſe from exceſſive, or violent Exerciſe of the Body; or, that they may proceed from Extraordinary Anger, Sadneſs, or immoderate Grief (as D. Schadius obſerv'd in a certain Woman, who from extraordinary Grief for the Loſs of her Husband fell into an Heſtick) none doubteth. Our Author deriveth this Diſeaſe alſo from immoderate Watching, as alſo from long Fasting, or from Meats of ſmall, and bad Nouriſhment, and with many Reaſons condemns the Saliva or Spittle. He obſerveth alſo that this Diſeaſe, as alſo the more Stubborn *Quotidian*, *Continual*, and *Intermittent* Fevers, have other Symptoms attending them, as generally the Inflammation of the Entrails, and chiefly of the Lungs, and thereupon Ulcers and Apoſtems: He Condemns not the Liquor of the Glandules or Pancreatick Juice; ſo much for being ſharp, or ſowre, as for being clammy, by which the Bile or Choler becomes more Sluggiſh, and the *Lympha* more Dull.

He looks upon the Exceſſive Clammineneſs, or Viſcoſity of the Humours in General, and particularly of the Blood it ſelf, as the true cauſe of waſting away in an Heſtick Fever; for by that the Nouriſhment of the Parts is by little and little Deſtroyed.

As for the Cauſe of a Fit after Eating, he aſcribes it to the *Saliva* being too Glutinous, whence the Chyle paſſing ſooner to the Inteſtines, and meeting with the Bile

or

or Choler in its way, takes a Tincture of it, which is Communicated to the *Saliva*, and ſo by Circulation to the Heart; from whence a Pulſe quicker than ordinary is raiſed, as alſo ſome Redneſs in the Face, and a gentle Heat in the Skin, which according to the Conſtitution of the parts produceth other Symptoms in other places.

But when the Heſtick proceeds from an immoderate Motion of the Body, in this Caſe he thinks, that not only the animal Spirits, but that the *Serum* of the Blood is Exhausted, and thence it is, he ſaith, that all the Humors become ſharp.

As oft as the Heſtick comes from Grief, he Aſcribes the Cauſe to the Pancreatick Juice, which being ſoured, renders the other Humors more Clammy and Sluggiſh.

The cauſe of an Heſtick from Exceſſive Watching, he derives from the Conſumption of the Animal Spirits, and the cloſer crowding of them together, as alſo the ſharpneſs and Tenacity of the Humors.

When the Heſtick comes from long Faſting, he ſaith there followeth a General ſharpneſs of the Humors through Defect of proper Nouriſhment, which in Concluſion, produceth Sluggiſh and Clammy Humors.

When a Heſtick ſucceeds a *Quotidian*, then he concludes ſome Errors have been committed as to Diet.

When it ſucceeds a *Synochus*, he aſcribes it partly to the Acrimony or ſharpneſs of Choler or Bile, and partly to the exceſſive uſe of ſuch Medicines, which even corrupt

and thicken the other Humors in the Body.

When Intermittent Fevers end in an Heſtick, they breed Peccant Humors more or leſs.

When a Heſtick ſucceeds an Inflammation or Apoſtem of the Nobler Parts, eſpecially of the Lungs, it comes from a Filthy Corruption, which hath invaded the whole Maſs of Blood, as alſo a Depravation of Nouriſhment, whence all Parts in General are rendred unfit for their Natural Functions.

ſ. 9.

V^C confels with *Sylvius*, That the Cauſes of this Heſtick Fever are Various, and Manifold; for whether, as he ſaith, the *Saliva*, Nouriſhment, or any of the Non-natural things may immediately produce ſuch a Fever, I very much doubt; neither is the Pancreatick Juice, the glandules, or any other Humors any otherwiſe Prejudicial, than as they infect the Maſs of Blood, inducing a Cacochymy, or ill Habit of Body, and ſo, as it were, making way for the Inflammation and Suppuration of this or that more or leſs Noble Entrail, and ſo they cannot immediately produce a Heſtick Fever; but rather it is to be believed, That the Humors, either the Pancreatick Juice, the Lympha, or ſome other, as they paſs through the ſuppurated Bowels, contract a certain ſharpneſs, and thus diſorder the Maſs of Blood, whence a Heſtick may proceed. For it is certain that in this Diſeaſe the Blood becomes ſharper than it ſhould be, from thoſe Cauſtick Salts, ſometimes from a certain ſharp depraved

praved Matter, which Incorporates it ſelf with the Blood and other Humors in its Circulation; whence comes the Name of an Heftick or Habitual Fever, becauſe the Cauſe thereof is in a manner Fixt in the ſolid parts. This Fever may Spring from the Diſeaſes of the Head. Thus at *Hanover* I opened a Boy of Fifteen Years, and a Girl of Nine, and found I could not aſcribe the Cauſe of the Heftick or the Death of theſe Children, to any thing but an Apoſtem, radicated in the Subſtance of the Brain. In like manner we have ſeen many Heftical after a Pleuriſy, as *Sydenham* has obſerved in theſe Words. "Some-
 "times after a great Inflammation,
 "and Omiſſion of Bleeding in the
 "Beginning of the Diſeaſe, there
 "groweth an Apoſtem, from Cor-
 "ruption gathered in the Hollow-
 "neſs of the Breſt, in which Caſe ei-
 "ther the Fever altogether ceaſeth,
 "or at leaſt becomes milder, and yet
 "the Patient not out of danger,
 "but after an Ulcer in the Lungs
 "and Heftick Fever, the poor
 "Wretch dyeth of a Conſumption.
 Sometimes alſo it ſucceeds a Dropsy of the Breſt, and *Abdomen*, as alſo any Weakneſs, or Indiſpoſition of the Stomach, the Inteſtines, Liver, Spleen or Meſentery, or any other Part, containing or contained; for a Heftick uſually ſucceeds inveterate Ulcers, *Fiſtula's*, and ſuch like Diſtempers of thoſe Parts; as after a *Fiſtula ani*, a certain Citizen got a ſad Heftick, and dyed of it: for when the Humours, by way of Circulation, paſs through thoſe affected Parts, they contract ſome New Infection, by which they create a great Diſturbance in the Maſs of Blood, Super-

inducing a ſharp Indiſpoſition: ſo that every Heftick Fever is in a manner Symptomatical. For if, Corruption from exulcerated Lungs or any other Part that is wounded, paſſeth through the Lymphatick Veſſels to the Heart, and cauſeth a Heftick, why may not a Purulent Humor lying in any other inward or leſs Noble part produce the ſame?

The Procatactick cauſes herein concerned, are bad Air, Nouriſhment too Spirituous and ſharp, producing Groſs, Clammy, and ſharp Humours, amongſt which Sugar is very bad, for it is ſo far from true Sweetneſs, that it is able to diſſolve Braſs it ſelf; nay, the Portugueſes know how to Deſtil of the Reeds thereof a Spirit that is perfectly Cooling, Biting the Tongue, and Corroſive, even to the Conſuming of Metals, Bitter and of a Nitrous Taſt. But I am weary of Repeating theſe things that are ſo well known, and therefore ſhall haſten on to my intended Diſcourſe. Exceſſive Watchings, unreaſonable Studies, immoderate Sleep or Motion; the ſadder Paſſions of the Mind, Grief, Anxiety, Sadneſs or Care, Envy, Anger or Hatred, play their parts here alſo; and for Exceſſive Evacuations, 'tis well known how prejudicial they are.

That Conſuming away in a Heftick Fever, in my judgment, may proceed from the obſtruction of the *Vaſa Laſtea*, or Milky Veſſels in the Meſentery; for then the Blood ſowres, becauſe it increaſeth not, and becauſe the Watery parts of it fly away; for when the Watery Fountain in the Blood is loſt, which may happen many ways, the Blood Contracts a ſharp Fermenting

ing Indisposition, from the tart and corrupted Chyle mixing with it; hence it grows so sharp, that it becomes unfit for Nourishment, and even in a manner devours the Flesh from the Body, leaving scarce any thing but Bones. Sometimes it falls out, That the Capillary Arterious Vessels are obstructed, so that the Blood cannot pass through them; whence the Humours by standing still sower, and wear out the Body; in these Cases there is not always a Fever; but if in any Ignoble part there happens to be a Suppuration, so that any Corruption be Communicated to the Blood, by changing the Texture thereof, it causeth a Fever, and by sharpening or sowing of the Blood, addeth a Consumption or *Tubes*.

Heat also two or three Hours after Eating increaseth in the Body, because of the mixture of the Vicious Chyle with the Blood, which brings such a Matter of the first Element as cannot be carried thorow the Pores of the Purulent Blood, which also is not duly mixt in the right Ventricle of the Heart, and so makes other Pores in the rest of the Blood.

The quick, and frequent Pulse in this case doth not proceed, as some think, from any Clamminess, for that would perhaps produce the contrary, but rather from a disorder of the Animal Spirits upon the Fibres of the Heart, and Arteries, and from obstruction of the Entrails; for when they are obstructed, a thin Matter passing through the narrower Pores, forceth the Blood upwards; and hence the Pulse is Weak, and Quick. We have known also a Hectick Fever to be occasioned from

the unseasonable use of Baths.

The Pain of the Head and sharpness or Burning thereof proceeds from Obstruction, and from the Blood grown sharp with the great Heat of the Fever, or from some Inflammation perhaps in some ignoble Part when the Fever is not well Cured, which Inflammation being suppurated and mixed with the Blood, createth a sharpness there, and so produceth a Hectick.

The Blood also may be sharpened by too great an Abstinence from Drink, from whence Burnings and Pains are often produced. Children sometimes are subject to Hecticks from Eating of Crude Meats, whence the Milky Vessels are obstructed, the Acid increaseth, and the passage of the Chyle into the Blood prevented, or depraved before it comes there, of which we shall Treat in its proper place.

§. 10. Prognostick.

THIS Fever is very Dubious in the Event of it: for it is often Mortal, especially if it be in the third Degree, if the Face be extraordinary Lean, the Urine Oily, Night Sweats, and Continual Heat, &c. The first and second Degree is more easily cured than the third; so that which is in a manner radicated with a Consumption is most difficultly cured. So also is it when any of the *Viscera* are Corrupted, Enflamed or Exulcerated; for in this Case the Blood is so infected, and disordered, that it is almost impossible by Art to reduce it to its Purity, though in Boys and young Men, and if

it be Simple the Cure is easier.

Hectick Fevers generally Rage from the fourteenth year, to the thirty fifth, and those that are Sick at that Age are hardly cured, but those who are Hectical before this Age, or a little after, more easily escape, and are often cured, or prolong their Life by some Palliative Cure, especially Women. A Looseness happening upon it, is no good Sign. If a Hectick assaults one from Corruption in the Lungs, or any other part, 'tis very difficult, or impossible to be Cured, but if with other Signs there happen a shedding of the Hair, it is incurable. The greatest Hope is, if the Patient, Nurse, and Physician do what they should do.

§. II. Dietetick Cure.

NOW let us come to the Cure it self, and first to Diet, which consists in the due observance of the six non-naturals, for the Matter of Remedies is taken from Diet, and Pharmacy; as in all other Chronical Diseases Diet doth much, so here particularly it is of so great Importance, that it does many times more than all the Medicines that are given. Therefore choose a Temperate Air, or make it so; such a one as inclines to Cold, and moist, or rather according to Dr. Sydenham's Advice, Change of Air, and Journeys may do much good. Galen 1. Meth. c. 8. in the hottest time of Summer orders his Patient to live under Ground, in a place that is very Cold, and much open to the Wind. By which Remedy Riverius observed, that one who was extremely Hectical, was cured in a Months time. The Air in a

Chamber may be altered by Sprinkling the Flowers of cooling Herbs with Spring-water. The Air of one Country or place is worse than that of another; so in the Precincts of Hanover this Distemper is Endemical and peculiar to the place, with Exulceration of the Lungs; for the Rigid, Inflexible and sharp Particles of the Air, easily entering into the Mass of the Blood and altering it, render it Corrosive, by which the little Bladders of the Lungs being Eroded they become Exulcerated.

Let the Food be of such things as sweeten the Blood, of good Juice and easie Digestion, or Nourishment, as Broths of Hens, Crabs, Capons, Veal, with Yolkes of Eggs and cleansed Barley. Veal, Pig, Pheasant, Partridge or young Hare, &c. are good. *Panada's*, all things made of Barley, Oates, or Rice with the Cold Seeds, are also proper. Divers Garden Herbs, as Purslain, Endive, Sorrel, and Borrage, and such like opening Roots, if Boyld in Broths. In this Disease also Fish that live in Rocky, or Stony places are excellent. As for Fruit, Apples, Pears, Prunes, Cherries, Grapes, Figs prepared and boyled with Honey are very good. They that have a stronger Stomach may use more Solid and Viscous Nourishment, as Calves-feet, the Flesh of Snails, Crabs, Tortoises, Frogs and Cockles in their Broths. To the more delicate we give the Pulp or Flesh of Capons, and Partridges, Almonds, Pine-Nuts, and Sweet-Meats, and particularly Gellies. The following one is very good,

Tak;

Take of the fresh Gelly of Harts-horn three Drachms, pour to it two Pints and a half of Spring-water, of Red Wine half an Ounce. Digest it for twelve Hours in a Glazed Vessel, afterwards add of the Root of *Scorzonera* half an Ounce, the Root of Succory two Drachms, Endive Leaves a handful, Raisins Skinned three Ounces. Boil it a little more than half away, strain it and add of the Confection of Alkermes a Drachm, place it in a Cool place, in a cold Vessel, and it will become a Gelly.

All things made of Milk are here very proper.

Let the *Drink* be Barley-water, or a clear Drink made of Opening Roots and Barks; or, which is better, a Decoction of *China* with Raisins, as also Emulsions. All strong Spirituous Drinks are dangerous, and many times cause this Disease, yet small *Rhenish* or *Mosel-Wine*, with a little Water mixt in it, may be allowed.

Let their *Sleep* and *Exercise* be moderate.

To keep the *Body* open, now and then a Glyster of Mollifying Herbs will be very proper, and you must promote the Natural Evacuations, but as for others, have a care of them; as the voiding of Blood, &c.

Let the *Mind* be at ease and Cheerful. Sadness and Grief are very destructive here, and have often caused a Hectick. Let the Patient forbear Venery, which waists and dries the Body much.

§. 12. Pharmaceutick Cure.

THESE things premised, let us come to the *Pharmacy*, or Medicines here to be used, which according to the *Galenists* is thus;

Those, who to correct a dry and hot Indisposition, commend Coolers, and Moisteners, are of opinion, that in this Case those moistening things are restorative, therefore they prefer them to Coolers, which given in Excess, may even stifle the Natural Heat. Amongst Moisteners and Coolers are reckoned the Flowers of Water-lily, Roses, Bugloss, Borrage, Endive, Lettuce, Sorrel, Succory, the four cold Seeds, greater and less, of which they make up several Compositions. At the Beginning, if the first Region be foul, they prescribe some slight Purges, as *Manna*, *Cassia*, Syrup of Roses Solutive, and if the Patient is strong enough, sometimes an Infusion of Rhubarb, with Tamarinds: As for Alteratives they reduce them into the form of Juleps, Broths, and Emulsions, which see amongst Practitioners.

Baths, which, as they say, are both cooling and moistening, they prefer beyond all other Remedies, in which they put Mallows, Violet Leaves and Bears Breech, to render it more moist. *Zacutus Lusitanus obs.* 35. l. 3. *praxis administrande*, commends extremely a Bath of Water and Oyl. Some also are for a Bath of pure Milk, and after Bathing they anoint the Body with Oyl of Lilies, Violets or Roses, and apply outwardly cooling and moistening Medicines to the Heart, Breast, Liver and Kidneys.

§. 13. Pa-

§. 13.

Paracelsus will cure an Hectick in a Months time by his Secrets; yet never tells us what those Secrets are. Helmont follows him as a faithful Disciple or Scholar.

§. 14.

Sibius, according to the different Causes that produce this Hectick, proposeth different Methods; yet in general, by reason of the Clamminess, and Glutinosity of all the Humours, he adviseth the more kind Aromatick Medicines, and Oily Volatil Salts, because they cut and correct the Humors, and reduce them to their first purity.

He commendeth also Asses milk, Womans-milk, Goats, or Cows-milk, taken warm.

As for fixing a Methodical Cure according to the Diversity of Humors, you may establish it from what hath been already said. He observes well also, that if the Hectick proceeds from any Inflammations, Apostems or Fistulous Ulcers, it is scarce cured without administering at the same time Remedies appropriated to those Distempers. Amongst Consolidating Medicines, he praiseth the anisated Balsam of Sulphur, as also the more fixed Medicines of Antimony, but not any thing that promotes Vomits or Stools. He commends also a Vulnerary Decoction.

§. 15.

IN Our Judgment this Disease hath these following Indications. First, That the Blood be sweetened, and corrected; for then there would be no longer Vexation of the Animal Spirits, but all things would move pleasantly. Secondly, That those Diseases be cured, from whence the Hectick proceeds; or which are continually causing some Acrimony to be mixt with the Blood. Thirdly, That the Symptoms that attend the Hectick be mitigated.

For those things which correct, and moderate the Sharpness of the Blood, are most proper here; as the milder Volatil Salts, and earthy Substances, provided they contain in them a great Quantity of a pleasant gummous Volatil Salt; as Crabs-eyes, Unicorn's-horn, Pearl, Harts-horn, Bone of a Stags Heart, Bole-Armoniack, *Terra sigillata*, *Lap. Percarum*, *Asellorum*, &c. Amongst Minerals, you may use these; *viz. Antimonium Diaphoreticum*, *Bezoarticum Mineral*, *Solare*, *Lunare*, *Joviale*, *Specificum Stomachicum*; as also that famous Anti-hectick of *Poterius*, of which I have as yet seen but little Success; and if it hath any Virtue, it is in concentrating the Acid, which Crabs-eyes will do very well. The kinder sort of Medicines, as Turpentine, Rosin of the Larch-tree, *Gum. Ammoniacum*, and *Galbanum*, are used with great Success, because they have something in them that is glutinous, and gummy.

Cooling Medicines, so called by the Ancients, are not profitable, as cooling, but, as sweetning, opening and tempering. First, All Watery Medicines, in which there

Ecc is

is any Volatil Salt, are profitable, such as the common Coolers, which cut, and attenuate; as Succory-roots, or the whole Succory, Dandelion, Sorrel, Leaves of Buglofs and its Flowers, also the Flowers of Violets, Furnitory, Sorrel, &c. Secondly, all watery, spirituous, and sweet things, which are void of Sharpness, are good; as *French, Spanish,* and *Canary Wines*. Meed and such like, in respect they correct the sharpness of the Blood, and fix and pacify the Spirits; for which Medicines of Lead also are excellent. Here also the lighter and more gentle Antiscorbuticks, and Diaphoreticks, are proper, some forms of which we shall set down here. I have known several recovered with the following destilled Anti-heetick. I would not have the heap of Simples that enter its Composition deter the Reader.

Take a Capon with the Entrails out, boyl it in an earthen Pot, the Bones being bruised, with eight Pints of Broth, infuse in it of the shavings of Sassafras-wood half a Drachm, Man's Skull, Elk's-horn of each three Drachms, China-root an Ounce, Tincture of Scabious, Liver-wort, Fluellin, Rosemary, Flowers of Peony, Line-tree, Scabious, Coits-foot, lesser Daisy of each half a handful, *Rasur. subtil. Visc. Psor.* an Ounce and a half, the Crum of White-bread, old Conserve of Roses of each three Ounces, one Fox's-Lungs took hot out of the Body, Hens-livers, cleafed Snails of each Ten, Frogs fifteen, the juice of Brook-lime a Pint, or in Winter-time instead of the juice two

Pints of the Destill'd Water of the same, which may be sweetened with pearled Sugar.

With which destilled Liquor you may make Emulsions, and every day take them after the following Manner.

Take Green Melon-seeds two Drachms, *Aq. Anti-hectica nost.* six Ounces, of pearled Sugar a sufficient Quantity. Give this for one Dose about the Evening. Or,

Take Pine-nuts two Drachms, Hemp-seed a Scruple, *Aq. Anti-hectica nost.* three Ounces. Make an Emulsion, to which add of Milk of Sulphur half a Scruple, of rich Cordial Powder eleven Grains, pearled Sugar a Drachm. Mix them for one Dose.

It is better to give your Medicines in a Liquid than a Solid Form. Let the Diet be as it is mentioned before.

Amongst Alteratives, I much approve of Raisins, which not only moderate or correct, but also nourish. Boyl them with the Roots of Succory, China, or *Scorzomera*, or infuse them a whole Night, strain them the next Morning after a little boyling, and so give it. This is an Experiment of the great *Emmullerus*.

That excessive Heat in the Palms of the Hand, and bottom of the Feet, is best removed by Watery Medicines, as Juleps of Barley-water, Baum, Borrage, Lettuce, Succory with a little Cinnamon, Buglofs, Rasp-berries, sweet Pomegranate, and such like. Medicines also that have a pleasant sharpness, are

are good in this Caſe, as a Tincture of a ſufficient Quantity of May-dew with Violet-Flowers, the leſſer Daiſies, Borrage and Bugloſs. Some Spoonfuls of it may be given twice or thrice a day.

Or,

Take of *Ros Virioli*, ſeveral times Cohobated from its own proper *Caput Mortuum*, fix Ounces. Or,

Take of *Liquor Terra foliat. tartar.* two Drachms, of which may be given twenty drops often in a day, which in this caſe is an excellent Remedy. Or,

Take of *Aq. Anti-heſtica Poterii*, or *Lap. Cancror.* a Scruple, *Mag. Saturni* half a Scruple. Mix them, and give it at one Doſe. Or,

Take *Species Diaſaturni*, *Nitrum Vitriolatum* of each half a Drachm.

All nitrous Medicines are generally good in this caſe, as *Sal Prunelle*, or Medicines prepared of Lead, as alſo Camphore in a ſmall Doſe mixt with other things, for they quench the Thirſt, for which alſo ſeveral gargling Medicines are preſcribed.

The fore-mention'd Medicines hinder the dangerous Sweat in an Heſtick, eſpecially that noble Tincture of Vitriol, Steel and Lead, which is called *Tinctura Anti-phthiſica*, as alſo all earthy Things, and ſuch as gently Incrate, as Bole-Armoniack, ſealed Earth; and laſtly Gellies prepared of Quinces, Rob of Barberries, as alſo Aluminous Medicines given ſparingly.

To correct the ſharpneſs of the Blood, all Sulphureous and Balmical Medicines are very proper,

as *Balaſamus Anglicus ex Terebinth. flos Sulphuris*, with *Elixir Proprietatis*, and *Balaſam of Peru*. For the more delicate, theſe following Lozenges will be very convenient.

Take of *Flos Sulphuris Myrrhat.* half a Drachm, Crabs-eyes prepared, Red Coral prepared, *Pulvis Haly Abb.* of each a Scruple, prepared Pearl fifteen Grains, *Lapis Prunelle*, *Sal Armoniac.* of each half a Drachm, *Species Diam. dulc.* a Scruple, Sugar a ſufficient Quantity. Make Lozenges. Or,

Take three Green Frogs dyed, prepared Pearl a Drachm, Red Coral half a Scruple. Mix it into a Powder, and give of it every Morning a Drachm, in an Emulſion of the *Aq. Anti-heſtica*, continuing it for a time. Or,

Take *Pulvis Anodyn. Confortar. Anti-heſtic. Poterii* of each half a Scruple. Mix it for a Doſe.

Take *Species Diaſaturni Mynſichti*, *Diamargaritum frigidum* of each a Drachm and a half. Mix them for ſeveral times.

If you are for an Electuary, That which follows is good.

Take of the old Conſerve of Roſes two Ounces, Flowers of red Poppy an Ounce, *Scabious* half an Ounce, *Species Diamargariti. frigidi.* Elk's-horn finely prepared of each two Scruples, the Anti-heſtick of *Poterius* a Scruple. Make up an Electuary with a ſufficient Quantity of the Syrup of Jujubes and Snails.

E e e 2

When

When theſe things fail us, we muſt come to Milk, which hath recovered many. Either the Patient may ſuck Womens Milk from the Teat, or Drink Aſſes Milk warm, which is beſt, or Cows Milk, which we mention'd before. In the mean while he muſt abſtain from all other Meats. Butter of Womens Milk is very good alſo, and Whey mixt with a little Juice of Citron.

In the Afternoon a Bath of Freſh Water, Milk or Olives for half an hour, is very good; as alſo Alum-Baths.

If there comes a Fit after Eating ſome Mineral Febrifuge may be taken.

All things that ſwallow up the Acid, are of great uſe here. Salt of the *Caput Mortuum* of Vitriol, and *Crocus Martis aperitivus*, are great Secrets in this Diſeaſe.

Cray-fiſh are very good to deſtroy that Salt Acrimony in the Blood.

Purging and Bleeding are here to be omitted, as dangerous; yet an Opening Glyſter is profitable, provided it be not ſharp, and if a freſh and green Briony Root be added.

If from the Viſcidities of Humors, ſticking in the ſmall paſſages, there appeareth a neceſſity of Purging, you may mix ſome Sudorifics with your Purges, but in a ſmall Quantity, for otherwiſe they cauſe mighty Obſtructions.

If the Patient grows Weak, *lac. Perlarum* is very good.

When there is an Exulceration in the Bowels, Baſſamick Medicines are moſt proper, as the Aniſated Baſſam of Sulphur, and all

Wound-Potions, eſpecially my Traumatick Eſſence.

He that deſires to obtain an eaſier way of ſweetning Alum, let him proceed thus; Let him take powdered Alum, and deſtil it by a Sand-heat, then take the Phlegm, and add it to its Body, and ſo repeat the Deſtillation for ſeven times, till the whole Phlegm remains in its proper Body: then let him bruife the Alum thus prepared, and diſſolve it into a Liquor in a moiſt Place *per Deliquium*. Then digeſt this Liquor in a Bath for twelve or fifteen days; afterwards, when by Filtration you have got a clear Liquor, coagulate it with a gentle Heat. This is not only good in all Fevers, but alſo in Diſeaſes of the Breſt, and eſpecially in an Heſtick. The Doſe is from Ten Grains to Fifteen in a convenient Vehicle. If you cannot have this, *Manna Aluminis*, ſo called, is good, as we have found by repeated Experience, if it be deprived of all its ſharpneſs by many Operations; for there is no other way ſo proper to ſtop thoſe troubleſome Night Sweats, as by the uſe of this Aluminous Liquor, and the Anti-phthiſick Tincture, taken in the Night, and moderately ſeaſon'd with ſome grateful Acid.

Amongſt Outward Medicines we commend anointing with Man's Fat, *Unguentum refrigerans*, *reſaceum*, *reſumptivum*, the Oyl of Frogs, and Butter of Womens Milk: Epithems alſo of Roſe, Violet, Borrage, Sorrel, and Baum waters, &c. may be applied to the Heart, and Liver. But enough of Outward Medicines, ſince they do but little good.

As

As for *Catarrhus* Fevers (which usually are in the Winter-time, and presuppose either a fulness of Humors in the Body, or the stoppage of the Pores) Bezoardicks are most proper, mixt with some Anodyne Pectorals. All preparations of Amber are good also: so likewise the Pectoral Elixir, with the Bezoardick Tincture. Venesection is dangerous, because Nature hath already thrown the Peccant Matter out of the Vessels. The Patient seldom fails here, if well looked to. It is sometimes infectious.

Amongst these Fevers is reckoned the *Purple* Fever, which is either Benign, or Malignant. This oftentimes, like the Malignant Fever, is accompanied with great Pains in the Head, and small Sweats, &c.

There is an Itching in all Parts of the Body, wherever the Signs of this Disease appear. There is also a sharp and burning Heat. It is a Disease betwixt an *Erysipelas*, and an Itch, and is distinguished from the *Spotted* Fever and Measles, by the marks in the Skin. It proceeds from sharp, salt, serous Humors in the Blood, which Nature presently flings off to the Circumference. It is often occasioned by too violent Motion. Young Children are subject to it, and Women from their moist Constitution, more than Men. Sometimes it riseth from the Retention of their Natural Purgations

after Child-birth. Amongst remote Causes are, the heat of the Liver, and excessive Venery.

Where there's no Malignity, Purging and Bleeding are a present Remedy; for Bleeding is good for those that are often troubled with an *Erysipelas*. Those things which Purge away Water, and Choler are best in this Case. As for preparing Medicines, all those which are commonly called cooling *Hepaticks*, are good, yea, they do the Cure sometimes of themselves. And generally all things that are good in the Itch, or *Erysipelas*, are also good here; as Fumitory, Elder, and all temperate Anti-scorbuticks. So also Preparations of the Woods, as their Essences, and Decoctions, *Rob Sambuci*, &c. Also all Nitrous Preparations, as *Nitrum Perlatum*, but in the Malignant *Purple* the more fixed, and milder Bezoardicks are to be given, for those Bezoardicks which are Volatil, are apt to promote the Inflammation, except the malignity be wholly to be cast off. But here you must always have regard to the foregoing cause; for Example, if it proceed from the Retention of the Child-bed-Purgations, you must give such Medicines as procure their Evacuations; amongst which are the Preparations of Myrrh, and Saffron, *Elixir Proprietat*. *Alexipharmacum Essent*. and the Spleen of an Ox. Bleeding is proper also in this Case.

C H A P. V.

Of Malignant Fevers, the Plague, Spotted Fever, Hungarian Disease, and other Epidemical Diseases.

§. I.

A MONGST the Numberless Calamities that invade the Life of Man, a Malignant Fever is not the least, which often with a Common fury doth equally destroy whole Nations, Cities, Towns, and Families, without any Distinction of Persons. It is a Disease most notorious, or famous for its Cruelty, Malignity, and dubious Event, in respect that it invades the very Capitol of the Soul, stifling on a suddain the Animal Spirits.

We comprehend all Pestilential Fevers under the general Name of Malignant ones: The *Petechialis*, or Spotted Fever, which has the Name of *Puncticularis*, *Peticularis*, *Stigmatica*, *Pulicaris*, *Lenticularis* & *Purpurata*, from the Resemblance of its Spots to Freckles, Punctures and Bitings of Fleas, is also called *Semipestis* and *Lues Pannonica*. The Hungarian Fever is distinguished from the common Spotted Fever, by that severe Symptom; (*viz.*) a Continual and almost intolerable Pain in the Head, and Orifice of the Stomach. This Distemper is usual in

Hungary, because of the strong Wines that grow there, and the Multitude of fenny Places. Crass from an observation of thirty Years tells us, That the Hungarian Fever varied every year as to its Symptoms.

Yet since these Fevers differ according as they are more or less Malignant, and are all to be cured by the same Method, I thought it convenient to treat of them all in the same Chapter, under the general Name of Malignant Fevers.

For that is a Malignant Fever, which is of a cross and ill Humor, deceiving sometimes the Patient, Physician, and all those that attend him.

In a Malignant Fever, all things are milder, as to Infection or Destruction, than in the Plague, or in any Pestilential Fever. A Malignant Fever is very bad, and therefore many times is a disposition and step towards the Plague, though it doth not always appear with that dismal Train, as Bubo's, Carbuncles, Spots, Measles or small Pox: nor is it more treacherous, than strong or furious.

These Fevers have several Names, from their several Symptoms: if
Spots

Spots appear, 'tis called *Febris Petechialis*, or a spotted Fever. But if the heat is not so great, and the Pain of the Head most vehement, with a *Delirium*, Sleepiness, and Dryness of the Tongue, it is called *Febris Castrensis* or *Hungarica*. If the Symptoms are severer, and many more dye than escape in the same House or Town, and if Blew Spots appear either before, or after Death, it is called a *Pestilential* Fever; from which the Plague differs only in its *Bubo's*, and Carbuncles, a most Acute and Pernicious Disease, attended with the worst Symptoms that may be, of which we shall treat in a Chapter by it self. More severe Symptoms also usually attend the *Malignant* Fevers than any other. They both assault, and kill many at the same time, and mock at the common Remedies, so that they are of a quite different Nature from all other. They are called also *Poysonous* Fevers, because they immediately proceed from some Poysonous Particles either bred within, or coming from without. By some they have the Name of *Antimedica*, & may also be called the *Physicians Scourge*, because in this case they dare promise no certain Recovery, but are often forced themselves to fall a Sacrifice to them, as Experience informeth us, of which see the Treatise of that Noble Gentleman, *Febr. President* of our College, about *Scorzonera*. It is called the *Plague*, only in respect of Men, not when Brutes or other Animals dye suddenly. An Infection raged not many years ago in *Westphalia*, amongst the Cats, and of late seized the Cows in these parts, from which the Men were free,

§. 2. Part affected.

TO find out the Subject of these Fevers, necessity and even Method require, That the Seat, and nature of the disease be known. The Heart is said, by the Generality of Physicians, to be the Primary, and Chief Seat or Subject of a Fever, because it is the Fountain of Life, from whence a Preternatural Heat is communicated to the rest of the Body, and this they would demonstrate from the Pulse, which proceedeth from the Action of the Heart, and the pulsifick Faculty, and fiery Spirits mixt with the arterious Blood.

But setting aside Prejudice, place the Seat of this Disease in the Blood: For as in Wine and Milk we observe strange disturbances, and Fermentations, why may there not happen the same in the Mass of Blood? Nor do we here exclude the Animal Spirits. The Secondary, and more General Subject of this Fever, are all the parts, in that the Disease, by help of the Arteries, invadeth the whole Body.

Thus also *Quilmont* blames the upper Orifice of the Stomach, as infected with some contagious Poyson; and likewise the other Vessels, which serve for the Preparation, Fermentation, and Chylification of the Aliment, when these are rather to be called the Subject of the cause of this Disease, than of the Disease it self.

§. 3. Diagnostick.

THE Diagnostick Signs are, the Foundation of a true Cure, especially in this *Malignant* Fever,

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Fever, where the Distemper admits of no truce, but privately devours the Patient. For it is very Treacherous. The greatest Sign that the Disease is Malignant, is, when it begins with a sudden failing of the strength, frequent Shivering, and very bad Nights, and is attended with Pains of the Back, and Loys, and Itchings, which are fore-runners of those Malignant Spots, which proceed from the corrupted Serum reftagnating there. In the *Plague* there is always a Fear, or Pusillanimity, from whence the Pulse grows small, frequent, and unequal, and there is also a Palpitation of the Heart, Fainting, or *Syncope*, and the greatest Shortness of Breath. Afterwards commonly there follows a most violent Head-ach, Phrensy, and Noise in the Ears. The Urine is like that of those that are well, and often inclining to be Red. There is also Thirst, Watchfulness, *Verrigo's*, which are followed by Phrenies, Pleurisies, Convulsions, Epilepsies and many other Mischiefers. In some the Spots are red, in others they are very small, and in others of a quite different Nature. So from the Diversity of the Cause there arise diverse Symptoms. In the *Plague* there appear Carbuncles and *Bubo's*. Many Sleep profoundly; in some few there is a Gnashing of the Teeth, they are also troubled with a pain at the Heart, Vomiting, Loss of Appetite, Thirst; and in the *Plague* they are Molested with a Pleurisy, Lientery with Worms, a stinking Flux and Bloody Flux. In some I have observed Deafness. Others are almost Blind, and Weep involuntarily; also they have a stretching or gaping

of the Eye lids, especially in Sleep; there is likewise a Bleeding at the Nose. Some have their Tongue enflamed, which turns black, as also do the Teeth; some are troubled with a Hiccough, which is the worst Sign that may be; and to be short, all the Faculties of the Body are disturbed, and all the Actions perverted. There are also very often burnings in the Stomach, and heaviness about the Heart. In opening of the Body of one that dyed of the *Plague*, I found all things in the Entrails blackish, and gangrened. There arise also cold and stinking Sweats, especially about the Fore-head. At last the Poyson of the Distemper discovers it self more manifestly by Swellings behind the Ears, under the Armpits, in the Groin and Knees, and in other places, by Black, Yellow, Red Spots, and Black Pustules, Carbuncles, and *Bubo's*. Here I cannot omit a passage that happened at *Francorbelium* in the upper *Palatinare*, Anno 1666. When the *Plague* raged with great Violence, a Servant-Maid had a Carbuncle on the Top of her ring-finger, which either, because she was Delirious, or through the Violence of Pain, she cut off with a Chopping-Knife; yet notwithstanding her whole Hand was Mortified the next Day. For *Bubo's* and Carbuncles vex, and torment the Patient even like hot Iron, nay, more than is credible. It is not necessary, that all these Signs appear in every one that is Sick; but sometimes these, sometimes others, sometimes more, sometimes fewer, according to the Nature, and Disposition of the Subjects, and Venom or Poyson of the Disease. In the *Hungarian* Fever,

Fever, there is a most violent Head-ach, joyned with a pain in the Orifice of the Stomach.

§. 4. Cause.

IN order to the happy Cure of Diseases, there is no Physician of any Sense, but asserts the knowledge of *Causes* to be very necessary. Therefore first of all let us see the opinion of the *Schools* as to the cause of *Pestilential* Fevers. They make them to be occasioned by a Putrefaction and Malignant Corruption of the Humors in the *Vena Cava*: which Malignity they judge to be less in *Pestilential* Fevers, than in the *Pestilence* or *Plague* it self. For they will have the same Causes in a *Malignant* and *Pestilential* Fever, as in the *Plague*, but in a less degree; hence *Fracastorius* makes the *Plague* to consist in a profound and sordid Putrefaction.

They condemn particularly, and chiefly here, the Air, Climate, Manner of Living and Contagion. As for *Malignant* Fevers, they deduce them from a morbid Disposition of Body, contracted by ill Meat or a bad Diet, which is very subject to putrefy and corrupt. As for the *Plague*, they derive it from the common Causes; to wit, the ill Constitution of the Air, and the Influence of the Planets. *Kirkeberus* and *Langius* make it to consist in a Verminous sort of Putrefaction, or Corruption: *Simon Paulus* a kind of Volatil Salt, that by Fermentation creates that great disorder in the Mass of Blood.

§. 5.

HENRY Mont, who thinks the Principal Nest of all Fevers to be in the first Region, saith, *Chap. 17. Sect. 10.* That the Seat of *Malignant* Camp-Fevers, is very strange and unusual, as also the spreading of them, whilst they have their Original from certain Vapours, arising from marshy Grounds, Minerals, ill Smoaks, Hospital-scents, and corrupt Stinks, which passing through the Lungs into the Breast, assault the convex Superficies of the Stomach, leaving behind a Malignancy. He derives the *Pestilence* from an Acid in the Veins, and is of Opinion, That the *Plague* is the quickest and severest Fever, and fluctuates in the *Archæus* like Poyson. And he saith, A *Malignant* Fever alone always draws something of Corruption to it about the Orifice of the Stomach; and that those Fevers are worse, whose Seat is rather on the outside of the Stomach, than on the inside, because that part is in a manner out of the reach of Remedies. And therefore the Camp-Fevers, and those that are Epidemical, are more troublesome than others, and are for the most part without Thirst.

For these Fevers, saith he, only infect from without, corrupting the last Nutriment of the Stomach, because as long as there is Life in the Body, there is Expiration, and Perspiration. For he hath Demonstrated that the Lungs, and *Diaphragma* are both full of Pores, through which those Malignant Vapours we suck in with our Breath, seize the Stomach, and often

ten corrupt the Nourishment thereof. For he distinguisheth the *Plague* from other Fevers, which has not its Seat in a Febrile Filth, or in the Blood, but affects the Vital Spirits with its ill Scent, which together with the Air we suck in, passeth immediately through the Pores of the *Diaphragma* to the Stomach, and not being able to go any further, leaves there its fatal Impression, from whence proceed Vomits, Head-achs, dead Sleeps, Phrensies, Swoonings, and the like.

Helmont allows of two Causes in Nature, and no more; (*viz.*) Matter and the Efficient Cause: The Efficient Cause in the *Plague* he calls *Archeus*, *Vulcanus* or *Semen*. The matter of it, he says, is a wild, irregular Spirit tinged with Poyson. Which he considers either as it comes from without, and is wholly and perfectly Pestiferous, exhaling from some Person or Carcass that is Pestilential, or from some nasty, infected place or thing; or else as it proceeds from some ill Vapor of the Earth, which being drawn in by the Lungs, grows by degrees of Fermentation Pestilential. The *Plague* therefore is either wholly generated within, without any foreign Assistance, or is altogether from without. So that according to our Author, it is an *Ens Naturæ*, subsisting in us of it self, and consisting of its own Matter, Form and Properties. In another place he calleth the *Plague*, *Venenum Terroris*, and proves that its primitive Seat is in the Hypochondries. He will not have the Matter of it to be any solid Body, or visible Liquor, and therefore no conspicuous Putrefaction, but a Gas separated

and degenerated from the substance of the *Archeus*. For he affirms that whatever visible Corruption appears in the *Plague*, is not so much the matter from whence it proceeds, as the matter in which it resides; whence he asserts, that Carbuncles, *Buboes*, and Escars, are not the Original Matter of the *Plague*, but rather the Effects of it: He saith, That the remote Cause of this Disease is a putrefyed Air or Gas; And, also that that which comes by Contact, although it be milder than that which ariseth from an Universal Cause, yet is for the most part Fatal, because in this the *Archeus* that has its Residence in the Member, is destroyed, from whence follows a Pestilential Gangreen of the Part. For the rest Consult the Author himself.

§. 6.

WHILE in all Malignant Pestilential Fevers, the *Plague*, Small Pox and Measles, holds, That the Blood is tainted with some Poysonous Infection, and is therefore subject to various Coagulations and Corruptions; in which Malignant Fevers, not only the Spirit and Sulphur, as in Putrid Fevers, grow irregular and troublesome, causing a mighty Effereescency, but also the very Texture of the Blood is dissolved, and its Liquor divided into several parts, from whence proceed those horrible Symptoms, not without danger of Life. He examineth also the Causes of many Poysons, and holds, That the Subjects in which the Infection more immediately setteth, are two; (*viz.*) the

the Animal Spirits, and Blood in the Vessels and Heart. He plainly shews how they are hurt by those Poysons. He saith, There are some Poysons which dissolve the Blood, and too much precipitate the Serum, as some stronger Purgers do. And that there are other Poysons again more dangerous, which congeal the Blood, and by destroying of its Texture corrupt it, inducing first a Congelation, and then a Putrefaction.

As to the Animal Spirits, which are very fine and subtle, if any thing of the Nature of Poyson lights amongst them, which consists of such fierce Particles, that inducing a great Effervescency upon the Nervous Liquor, the most Spirituous Portion of it is either driven up and down, or altogether vanisheth, whilst the rest of the Nervous Juice by some astringent force is fixed, or by an Ebullition grows unruly; from whence follow those Distempers of the Brain and Nervous Parts, (*i. e.*) Convulsion, Trembling, Shivering, Stupor, Palsies, and other severer Symptoms.

Our Author describes the Plague thus, (*viz.*) *A Contagious Epidemical Distemper, very fatal to Mankind, proceeding at first from Infection in the Air, and afterwards propagated by Contagion, which privately and lurkingly seizeth upon Men, extinguisheth the Animal Spirits, coagulates the Blood, mortifies the Solid Parts, and is attended with Spots, Bubo's, and Carbuncles, and other horrible Symptoms that threaten the Sick Person with Death.*

And he differenceth the Plague

thus; in that it is sometimes peculiar to this or that Climate, sometimes it rageth in several places at the same time, sometimes it is complicated with other Symptoms, and Distempers, and sometimes it is milder and less destructive than at other times.

The cause of this Pestilential Disease, in the Opinion of our Author, is the Coagulation of the Blood and Nervous Juice, like Milk turn'd fowre, or that has had some Acid pour'd upon it, whence the parts of it, being mightily infected soon curdle, and, like Blood extravasated, grow black and corrupted; whence the Motion of the Blood in the Vessels and in the Heart is stopped, and by reason of its Fermentation becomes more coagulated: Now whatsoever by Congelation is curdled, unless it be immediately evacuated, by stopping the Circulation brings Death on the Patient, and being driven to the Circumference of the Body, there sticketh betwixt the narrow passage of the Vessels, and either being altogether destitute of Spirits, as if it were Planet-struck, by its Mortification there, causeth Black or Purple Spots; or from the Salt, and Sulphur exalted by the Pestilential Ferment, and becoming turbulent, causeth several sorts of Swellings.

Our most famous Author describes a Carbuncle after the following manner. *A Carbuncle (says he) is a fiery hot Swelling, with abundance of little sharp and burning Pimples about it, and a most violent Pain, which discovering it self indifferently in several places is not Suppurated, but spreading more in Circumference*

sumference; burneth the Flesh and eats away whole pieces of it, leaving behind it a hollow Ulcer, as if a Caustick had been laid to it.

So also he learnedly treats of the Nature, and Original of Carbuncles, Bubo's, Purple Spots, &c. in his Chapter of the Pestilence.

He saith, *Pestilential* and *Malignant* Fevers differ not only from the *Plague*, but from one another, according to the Degrees of Contagion, and Fatality. The *Plague* is a Disease that is infectious in the highest degree; a *Pestilential* Fever generally rageth with less Infection, and less Mortality. When there is only a suspicion of Infection, and the *Crisis* only more uncertain than in common Fevers, it passeth for a *Malignant* Fever, which is wont to seize several Persons in the same Parts or Country, after the same manner, and is in appearance like a *Putrid* Fever, and has almost the same *Crisis*. But if many Persons dye, and those who converse with the Sick, are infected with the same Disease, and if it spreadeth through whole Towns or Cities, it is then called a *Pestilential* Fever.

Our Author reckons *Pestilential* and *Malignant* Fevers amongst the number of *Continual* Fevers, and lays the fault upon the Sulphureous part of the Blood, which he saith is heated and fired into a Fever, and in these sort of Fevers he observeth an extraordinary Malignity joyned with the Effervescency.

But he thinks the Effervescency is performed after the following manner: The Sulphureous part of

the Blood growing extraordinary hot, by its heat is set on Fire; and whilst it burns, it heaps up a great deal of adust Matter in the Blood, from the subduing, and excluding of which, the State and *Crisis* do depend, as in other Fevers: Moreover the Blood being tainted with a Poysonous Infection, by reason of its malignant Ferment, begins to coagulate, and putrefy: and from some congeald Portions of it, there arise Swooning Fits, Faintness, Spots, and Marks, &c.

So according to him, the Contagion is Propagated by certain *Effluvia*'s that come from the sick Persons Body, from which Contagion or Infection according to the degree, or force thereof, the Fever is called either *Pestilential*, or *Malignant*.

When a Malignant, and Poysonous Ferment is joyned with the Prematural Effervescency of the Blood, there do not only succeed Coagulations and a Disposition towards Putrefaction in the Mass thereof, but also the Nervous Juice is infected, by which means it being grown unfit for the Brain, and the Government of the Animal Spirits, there follows a great disorder, and irregularity of them. Whence in these Fevers not only Spots and Pimples rise; but also Madness, Phrensies, dead Sleeps, Trembling of Joynts, Cramps and Convulsions succeed. Hence our Author in some certain years hath observed several *Malignant* Fevers, which without any appearance of Marks, have chiefly exercised their Virulency or Fury on the *Genu Nervosum*.

Our Author is of opinion, that the

the Blood impregnated with these Poysonous Particles, boyls up of its own accord, which Particles, he conceives, may either pre-exist in the Mass of Blood, or be taken in with the Air: If they proceed from corrupted Air, the Disease is General and more Popular; if from a particular indisposition of the Body, then there is but here and there one that is sick of this Disease.

Malignant and Pestilential Fevers are sometimes observed with one particular Symptom, sometimes they are accompanied with a Quinzy, sometimes with a Pleurisy, often with an Inflammation of the Lungs, sometimes with a Dysentery, &c. which as our Author observeth, happeneth not because the Infection by some peculiar Quality seizeth on this, or that part of the Body, for it doth equally infect the whole Mass of Blood, whence a *Crisis* is to be endeavoured in all parts alike. For when the Blood without any Malignity, by reason of its Coagulation, or any other causes does extravasate, the usual places in which it is apt to rest, are the Throat, Lungs, *Pleura*, and the Interstices. Wherefore it is no wonder, that, when in a Malignant Cause there follows a Coagulation and Extravasation, the Disease should fix it self in its Natural Subject.

§. 8.

Spiritus derives all *Malignant and Pestilential Fevers* from some Poysonous Particles communicated to the Blood, which are either taken in with the Air by the Lungs, or by the Pores of the Bo-

dy, or with Food at the Mouth. And these Particles, saith he, cause *Burning and Malignant Fevers, Dysenteries*, and the Plague, it self.

In almost all *Malignant Fevers*, he hath observed that the Blood is more fluid than at other times, which he saith happens in *Burning Fevers*, the Plague, and sometimes in the *Dysentery*, (*viz.*) as often as the Choler or Bile of it self is corrupted, from whose Excessive Acrimony, or Sharpness Fevers proceed; and indeed *Burning Fevers*; a certain sharp Acid also concurring at the same time, and stirring up a *Malignant Effervescency* in the lesser Intestines, from whence is occasioned a dreadful *Dysentery*. For when, as he saith, there are but two Sharps in Nature, a Lixivious Saline, and an Acid, as often as they meet, and clash with each other, they constitute a third or middle Substance that may be less sharp because broken; yet with a stronger Fire, it may become at last more sharp, and so much more dangerous as more difficult to be mitigated, and from its Volatility and Subtilty causing great, and sometimes deadly Changes or Alterations in us. Thence he is of Opinion that *Malignant and Epidemical Fevers* have their Rise from corrupt Air. He saith all Poysons derive their Force, and Efficacy from one of those two Sharps.

From the Collation of Symptoms he judgeth the cause of *Malignant Fevers* to be for the most part, if not always, a Volatil sharp Salt, which by concentrating the subacid Liquor of the Glandules, renders it weak and sluggish, from

from whence the Natural Consistency of the Blood is diminished, and so its Rarefaction prevented, and very often the Secretion of the Animal Spirits hindered. According therefore as that Volatil Salt, sharp, or not sharp, is either carried by Inspiration into the Lungs, and thence into the Mass of Blood; or with the Nourishment, and Spittle descendeth into the Stomach; or, as we said before, passeth in at the Pores of the Body; hereupon saith he, doth the difference of Symptoms in Malignant Fevers depend, as also upon the Humors that abound in each Body. He deduceth the weak and languishing Pulse from the Inconsistency of the Blood, and the sudden and unexpected Death, from the stifling and extinguishing of the Vital Flame.

Therefore according to him the cause of all Malignant Fevers comes from abroad, and never from the spontaneous corrupting of Humors in the Body. Thus he will have all Malignity to consist in a volatil, sharp Salt. He also maketh the cause of the Plague, to be a too great Fluidity of the Blood, which is caused by a sharp Volatil Salt, from which Volatil Salt he deduceth, in his *second Tractate of the Plague*, all the *Phænomena* that attend it, which the Reader may peruse, if he please.

§. 8.

We with *Willis*, before we come to the thing it self, will in short treat of the Nature of Poysons; seeing that from the knowledge of them, we may easily learn the Nature of the Plague, and all Epidemical

and Malignant Fevers, because their force, and Efficacy consisteth in the Solution of Continuity, whether they act upon the Body without, or exercise their Tyranny within. Therefore those Antidotes, as it appears to any Learned Man, work not by an Occult, but Manifest Quality; nay, there is not one Antidote of whose effect, or operation a probable Reason cannot be given. For we reckon all Antidotes in the number of those Medicines, that attenuate, cut, volatilize, absorb, and take off the Edge of sharp things, which are administered according to the nature of the Poyson; whether it consist in a certain kind of Volatil, Glewy Substance, and sharp coagulatory Salt that is contagious; or in certain sharp cutting Particles, that are apt to cause a Mortification in the Part, to the utter Subversion of the Animal Spirits. Hence follow disturbances of the Mind, Phrensies, Madness, Frigidity of the parts, and whole Body, Swellings, and Blewness, Erosions and Eating away of the Flesh, and such like Symptoms as arise from Poysons. Therefore the Particles of the Salts being grown thinner and lighter by heat, are carried upwards through the Air, and often wandring very far, in the end hit against hard Walls, and thereby grow sharp at the Points and Sides like Daggers. Many of these Saline Particles being joyned together, become Corrosive, which, according to the Diversity of the Matter with which they are joyned, compose in the Microcosm several Minerals; as Antimony, Arsenick, Cobalt; and these Particles being

ing rarefied by the heat of the Body, fly up and down and by breaking the Natural Texture, melt the whole Mass of Blood, attenuating it more than what is necessary to the disturbance of the Animal Spirits, and creating of Nauseousness, Vomiting, Gripes, Grawings, Fainting-fits, Tremblings, Convulsions, Madness and other horrible Symptoms.

These things being granted, we may easily shew, how these Malignant Spirits, rising from the Bowels of the Earth, are communicated to the Air, and grow so destructive to Mankind. To clear which, you are to observe, that these thin Vapours are more or less abundant, according to the difference of Summers. Therefore if the heat of the Sun is so excessive, that these sharp, and Volatil Spirits or Poysonous *Effluvia*, (which through defect of heat, could not be elevated to the outward Surface of the Earth) are by a greater Rarefaction grown active, and nimble, they may get not only above the Surface of the Earth, but also wander into distant Countries. And the greater hollownels or gapings of the Earth there are, either from the secret passages of Waters, or from Earth-quakes, the greater plenty will there be of Infections and Pestilential Exhalations. Which *Miasmata*, or contagious Particles, as experience too much informeth us, also may arise from standing Pools, dark Deins, and filthy Holes; as also from loathsome Carcases, whence proceed the *Plague* and *Malignant Fevers*. Thus in Camps amongst Souldiers, this Malignant Poyson is of-

ten occasioned through Nastiness, and Filth, and the Plenty and Various Colluctancy of *Effluvia*. Sometimes through Famine, and the Consequents thereof, our Bodies are more disposed to receive this Infection. And to come closer to the business; we must observe, that the *Plague*, as well as *Malignant Fevers* which only differ in degree, take their Source from the Air, which is as well the Fountain of Death, as of Life and Health.

This Air is that which supports our Breath, which with our Spittle passeth to the Stomach, enters the Pores, and being communicated to the Blood, and its *Serum*, is carried by Circulation to every part. From hence it appeareth how the Air, impregnated with these sharp and Volatil Salts, infects the Humors of the Body, especially the Blood, to the utter Subversion of the Animal Spirits, and Destruction of the whole Body. For those sharp Particles, being joyned with the Spittle, Chyle and Choler, (that is much like it) grow sharper; just as Sublimated Mercury, and *Aqua Stygia*, when put together, are more and more by degrees exasperated. By this it appeareth in what the Nature of Malignant Fevers consisteth, which Spring from a mutual Separation of the Particles of Blood from one another; but in a lesser degree than in the *Plague*, wherein there is the greatest Separation and Destruction of the Particles: For whilst the Texture of the Blood is violated, the Animal Spirits are in an uproar, flying here, and there
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in confusion, and causing great Disturbances, as well in the Brain as elsewhere.

Some distinguish the *Plague* from a *Pestilential Fever*, but they differ only in degree; for they both proceed from the disturbance in the Blood; yet there may be a very great Fever, which from the sudden failing of strength, may be like the *Plague*. Malignity therefore is nothing else but a separation of the Particles of Blood from each other, which in this Case is not easily remedied. For there are several degrees of Separation, as it appears in Milk, which is one way separated for making of Cheese, another for making of Butter, and another way when it turns Sowre. Thus it appears also in the mixture of Blood, with the Spirit of Nitre, Vitriol and distilled Venegar, and sublimate Mercury. The *Pestilential* Voyson raging up, and down, with its sharp volatile corrosive, and sulphureous saline Parts, cuts off the Fibres, and lesser Branches of the Blood, which being done, the other, grown heavy, and not easie to be moved, are jumbled into one heterogeneous Body, which is unfit for Circulation. The Sulphur is also very much corrupted, as it appears by the Stench, which in the time of the *Plague* lies about with its fiery Darts; whence *Borellus* c. 1. vol. 74. Speaks of a certain *Ermite* that could distinguish the *Plague* by its smell. The angry Enemy thus entred, and getting the better, seizeth on the more noble Parts, as the Heart, Brain, and Stomach, and other Parts, and placing a foreign Guard 'fore those Citadels of Life, is not only content to

cause Syncope's, Tremblings, and even mortal Anguishments in those parts, but to make Excursions even to the royal Palace of Reason, committing strange violences there on the chief Governours of Life, the Animal Spirits, tormenting them with intolerable Thirst, most violent Head-ach, Watchings, Madness, Phrensies, Convulsions, &c. and sometimes making an Excursion to the Superficies, seizeth on the greater Glandules, and causeth Carbuncles, Bubo's, and blew Spots, to the final ruin and subversion of the whole Body. Here by the way you are to observe that it is call'd a Carbuncle, because it is black like a Coal, and is found likewise in other parts as well fleshy as fibrous and glandulous. Sometimes also it breaketh forth in the inward parts, sometimes it is to be seen within the Tunicles of the Stomach, as well inwardly as outwardly, which hath been often observed by *Bartholin* and *Helmont*, and then there follow mighty Vomittings from corrupt Blood, that is coagulated in several places,

In the *Plague* there are Bubo's also in the Glandulous parts, because the sharp Particles of the Blood pass through the fleshy Parts; now the Pores of the Glandules being little, they stick there, and create Bubo's; but they proceed for the most part from the *Lympha* being vitiated and turned sharp.

There are Particles of a certain Figure, which are driven by the heat, and Ebullition of the Blood into the Pores of the membranous parts, which Pores if they do not wholly fill up but leave room for a thin subtil Matter to pass through, they

they cause a Swelling, heat and redness of the part, as we see in an Inflammation, which in the Brain, or its Tunicles, causes Madness; in the Jaws or Throat a Quinsy, in the Breast a Pleurisy, in the Intestines a Dysentery.

The Astrologers fly to the determinate Positions of the Stars, and to the Incompatibilities of Oppositions, and Malignant Conjunctions; but what virtue the Influence of the Stars have, I could never yet conceive, or how they should work upon inferior Bodies, unless by a Motion of Light, and Heat. For the heat which proceedeth from the Planets or Stars, is of it self but Weak, without the assistance of the Sun, and is a manner always in the same degree; so that to ascribe so great a change in the Bowels of the Earth, or in the Air, to them, is not warrantable by humane Reason. For the Stars are given to us only for to shew us the distinction of Times, Days, and Years, which as *Helmont* saith, are but Reliques of Paganism. Hence the most famous Astrologers, and Mathematicians in the World, as *Copernicus*, *Kepler*, *Brabe*, *des Cartes*, have confuted the vain opinion of the occult Virtues of the Stars, with solid Reasons, and as a thing contrary to all Experience.

But why some are infected sooner, some later, some not at all with these Fevers, or the Plague, when there is a common Cause; proceeds from the different Texture, Motion, and Mixture of the Blood: So in one it is thinner, in another more thick.

He whose Blood is thinner, or more fluid, from the too great Sharpness, and Acrimony of the Bile, is sooner infected with this Disease than others; on the other side, he, whose Blood is well tempered with a due Acidity of the Pancreatick, or any other Juice, as the Melancholy Man, is seldom or never infected with this Disease. For the Particles of the Blood being more closely joyned together, with their united force support the Animal Spirits against the common Enemy, from whence the sharp Particles of the poyson being blunted, either remain in the Body without any danger, or pass through, where there is little Resistance. It is a true rule, and observation, That during the Plague, every disease of the Body, putting off its own Nature, degenerates into the Plague. From all which you may easily guess, that the true cause of this, as well as of Malignant Fevers, is a corrupt *Miasma*, more, or less sharp, and Volatil, disturbing and even dissolving the whole Texture of the Blood with its rigid Particles. For nothing is more fatal to the Animal Spirits, than those sharp, and Volatil Exhalations, which stifle them, even as Smoke doth Bees. The quantity of this poyson is not material, since, as *Etmullerus*, Chap. 3. de virtute *Opii diaphoret.* Sect. 13. observeth, that it exerteth its force, and disordereth the whole Oeconomy of the Body, tho but the least quantity, provided it be actuated, and improved by the Native Heat, just as Yeast in Ale, or Leven in Bread, tho but small in substance, yet raiseth a great Fermentation,

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tation, and hence it is that a Gangreen, or Mortification is so often seen in the Bowels of those that are Sick of the Plague, as well, as of Malignant Fevers; as at *Francorbalium*, in the lower *Palatinate*, I saw a Woman and her Daughter opened in the same House, both the Stomachs of whom were perforated, black, and mortified. In some I have observed the *Diaphragma*, or Midriff; in others the Intestines as mortified, as if they had taken Arsenick. Almost all the *Phænomena* of this Distemper may be explained from the Dissolution of the Texture of the Blood, and the separated Particles reëtaginating here and there. For Salt, and that Arsenical-Volatil Sulphur is most destructive to the life of Man, threatening destruction to the Animal Spirits, a dissolution, and after that a curdling of the Mass of Blood. It is clear that the Sulphur is in fault, from the extraordinary Heat, and Effervescency, as also from those Sulphureous Darts, or burning Globes, that during the Plague are seen here and there in the Air; for to what else can we ascribe it, than to an Arsenical Sulphur, whose deadly smell hath killed many, which we and others observed, during the dismal Plague which raged, *Anno 1666*.

Kircher thinks that there are Worms in the Plague, which may consist with Our Opinion, for those Worms are composed of sharp, and Volatil Particles, which are apt to produce the same Symptoms; hence some call the Plague a venereal Disease. According to *Hedeus*, all the Humors of the Body, the *Humidum radicale*, the *Lympha*, and *Serum* are infected.

That suddain Weakness in these Diseases, sheweth that the Blood, when once infected, is unfit for Fermentation, as we may observe when Precipitate Mercury is mixed with the Blood, which kind of Contagion raged at *Francorbalium* in the upper *Palatinate*, about the year, one thousand, six hundred, and sixty, which being severe, and Stubborn, stopped the Fermentation of the Blood, and destroyed many.

The Head-ach in these Diseases, proceedeth generally from those sharp particles, that fall violently on the Membranes, and disturb the Animal Spirits.

A slow, and weak Pulse, which may happen also in other Fevers, proceeds from the Fluidity or waterishness of the Blood. In some Men the Blood is hardly Blood, and at the opening of a Vein it often flows out, but is nothing else but a hard Clod, scarce penetrable with a Knife, within which there is found no fibrous Blood; therefore it is no wonder, that such Men dye within the space of twenty four hours. In this case the Pulse is weak, which is an ill sign, because it sheweth that the Blood hath scarce any Fermentation left. D. *Alprum*, a Physician of *Vienna*, affirms the Plague abounds with a Salt, and sharp volatil Sulphur; for opening a Pestilential Bubo, he took the Virulent Matter, and put it into a Retort with a Recipient, over the Fire; at first there ascended to the Neck of the Retort a little Water, next a more Fat and Oily matter, at length a Salt; the Fire being put out, and the Vessels separated, there came forth a wonderful

derful prodigious Stink, so that altho the Chymist was well guarded, yet as if thunder-struck, he was seized with a mighty trembling of the Joynts. Breaking then the Retort, he gave the volatil Salt of that dismal smell or stink to one that stood by, that he might tast it, nay, he held it himself upon his Tongue, which Salt he thought as sharp altogether as *Aqua Regia*. Thus at *Francothalium* I knew a Maid sick of the Plague, who shed such Tears, that like *Aqua Fortis* they did eat the very Linen, and the poor Wretch expired the next Day after. Nay, all the Symptoms that attend the Plague, and Malignant Fevers shew plainly that there is a volatil sharp, and Caustick Salt. For as soon as ever this volatil, malignant Salt is got loose, it grows more fierce, and seizeth the Animal Spirits, and committeth a general out-rage on the whole Body, causing especially Gangreens in the Guts and inward parts.

The remoter causes may be many, and they consist in the Administration of the six Non-naturals, of which we shall say something, when we come to treat of the Care to be used in Diet. Fear above all other things, is the very Mid-wife of the Pestilence, a Fomenter of Contagion, and oftentimes the Messenger of Death, on the other side a quiet Mind; and well guarded Body, are as strong Walls to keep off this fatal Enemy,

§. 9. Prognostick.

AS to the *Prognosticks* of Health and Death, they are here very uncertain, which *Hippocrates l. 2. Aphor. 17.* long ago acknowledged, in these Words: *The Predictions of Acute Diseases are not altogether certain.* Therefore a Physician must go on with a great deal of Caution, nor can he well judge of the state or height of the Disease without well examining, and weighing the Signs.

Where many dye, the Disease is judged, more dangerous. Therefore it is best to suspend your judgment, till there appear some certain Signs of either Death, or Recovery. For it is hitherto observed, That the more severe the Symptoms appear in the *Plague*, and *Malignant Fevers*, contrary to what is observed in other Diseases, the greater are the hopes of Recovery; on the other side, the milder that the Symptoms are, so much the more dangerous.

A *Malignant Fever* is of the number of *Acute Fevers*, hence it usually lasts to the Eleventh, or Fourteenth Day. These severe Symptoms denote danger, as Swooning Fits, Cold Sweats, (which yet many have had without any harm) Looseness, extraordinary Weakness; but if the Symptoms are milder, there is greater hopes of Recovery, however there is no trusting to them, for they often deceive us, like some Dogs, who the less they Bark, the worse they bite.

As to the *Vital Faculties*, a good handsome, constant and equal Pulse promiseth safety, but

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if

if it be small, unequal, and disorderly, it sheweth great danger; especially if it be so from the beginning.

As to the *Animal* Faculties, a *Delirium*, or Madness, at the Beginning, which is not cured by Sleep, Forgetfulness, careless Lying down, uncommonly Uncovering themselves, convulsive Motions, Tremblings and Catching at the Cloths, constant Watchings, are all ill Signs. *Epiphanius Ferdinandus* saith, that a Hiccough in Malignant Fevers is a certain sign of Death; yet I have often observed it without danger. The Eyes are to be viewed every Day, which if they discover any fierceness in them, with other ill signs, the Patient seldom escapes; as those also seldom recover, whose Eyes ake without any appearance of an Inflammation. Deafness in the Beginning is ill, about the height of the Disease it is a good sign.

Hippocrates likes not the Trembling of the Hands or Tongue, because they are often fatal Signs. A dropping at the Nose, a *Cardalgia*, or Pain at the Stomach, great Indigestion, and Inflammation of the Eyes, and if the Eye lids are not so well closed, but that some white appears, all these things shew death at Hand.

Yet there is no sign so bad, as when the Patient catcheth at the Cloths, or folds them up, or catcheth at any Object hastily; for he that does thus, seldom escapes, as to my own Grief I sadly experienc'd in a Son of mine, who in this catching Fit fell into Convulsions, and so dy'd.

For this shews a great *Delirium* or Disturbance of the Brain, and

not only an Inflammation of the *Meninges*, but also of the Coats of the Eyes, and even an incurable confusion of the Optick Spirits, whence several false objects seem to fly before the Eyes of the Patient, which he endeavours to remove; yet according to some Physicians it is not always Mortal. Women dye not so soon of the Plague as Men, by reason they have a greater quantity of Serum; as also those Men escape best, who have the greatest quantity of it.

If in *Malignant Fevers* Spots appear the ninth or tenth day, with Signs of Concoction, it is a good Sign; on the other side, if at the Beginning, when they break out, they look blew and black, without those Signs of Concoction, and Appearance of Strength, which discover themselves in the former case, or if they be few, or very numerous, accompanied with heaviness, and difficulty of Breathing, it is a mortal Sign. In the Plague also, the sooner the *Buboes* and Carbuncles appear in their usual places, the better it is. *Buboes* in any place near the heart, or Carbuncles about the Neck, or behind the Ears, predict no good success.

These deadly Fevers for the most part conclude with Convulsions, Bleeding at the Nose, or elsewhere, cold Sweats, and Faintings, and Swooning Fits. Sometimes they turn into other Diseases, as I my self have observed Malignant Fevers, after the Consumption of the Animal Spirits, and weakening of the Mass of Blood, and in a Droplic, or other Cachexies according to the various Constitution of the Blood. In all Fevers

as well Malignant as Continual, Coughing, as also a moist, and sweaty-Skin, is a good sign; for it is an Argument that there remains good store of *Serum* in the Blood, and that Nature of it self performs this Separation.

§. 10. Dietetic Cure.

HAVING explained the Nature of Malignant Fevers, and the *Plague* with its Causes & Signs, it is necessary we say something of its Cure, which is performed either by Diet or Pharmacy. As for the Diet, that consists in the Legitimate use of the *six Non-naturals*.

As to the *Air*, let it be temperate, not such as comes from filthy Caves or Dens, or that which ariseth from dead Carcases, in Camps or other stinking Places; for no one can expose himself to the use of such Air without manifest danger of Life: Let it be corrected with clear Fires here and there, of Juniper, Aloes, and such sweet Woods: within Doors perfumes of the Shavings of Ox-horn, or Goats-horn, Brimstone, Gun-powder, or *Acetum Bezoardicum*. In the Bed-Chamber, Balls of Brass fill'd with some Cordial Antidote, and exposed to the fire, to make an Artificial Air, are also commended; as likewise the Ringing of Bells, and frequent Discharging of Guns. But he that hath a Malignant Fever, let him shun a cold Air, for as sad Experience informeth us, all those dye, who rashly in this Case expose themselves to the cold Air.

Let their Food be very little, but of good Digestion; Chicken, Capon, or Hen-broth, with Vipers-

grafs, and other altering Herbs, are here allowed: a very spare Diet is convenient, and necessary to those that are already Sick.

But all Pot-herbs, horary Fruits, all Purgers, as also all Salt Food, and any thing that hath Sugar, Honey, or Spice in it; and whatever is corrupted, or mouldy, is to be avoided. You may season your Meat with the kinder sort of Acids, as Juice of Citrons, Quinces, Raspberry, and the like.

For *Drink*, make a Decoction of Vipers-grafs, with Harts-horn, and Citron. *Crato* in his first Book, and second Epistle, testifieth that a Drink of Harts-horn doth more good than all other Medicines: You may also use a Gelly of Harts-horn, and put into the sick Persons ordinary Drink some drops of my Cordial Tincture. Wine is not to be allowed, unless for the comforting of the Spirits, for all Spirituous things, in as much as they increase Acrimony, and render the Spirits unruly, are to be avoided; for the Sulphur being kindled by that Malignant heat, enflames the Blood. And *Neurantz*, *Traictat. de Purpura*, as also *Hoferus*, observe, That whoever in this case have not abstained from Wine, have dyed; and I have known a Woman in a Malignant Fever, by excessive drinking of Wine, to fall into an Epilepsy. The use of Mineral-waters in this distemper is not safe. Let the Patient therefore use the foregoing Decoctions and Juleps, or Emulsions of Almonds.

As for *Sleep*, or *Watchings*, let them be moderate, and not exceed their due Course. Sleeping at the Beginning of the disease without some previous Antidote, or Bezoardick is dangerous. *Fif 3 As*

As for *Motion*, and *Rest* they must be moderate, lest they cause too great a Fermentation of ill Humours in the Body: yet *Rest* is more convenient for the Patient, that Perspiration being preserved, the Body may discharge it self of that gross Infection through the Pores, and the Bowels be restored to their natural Tone.

Great care is to be taken also of the *Passions of the Mind*, especially Fear, Pusillanimity, Dread, Anger, Sadness, for these have a great Influence on the Blood, which the Sick are to avoid, for the Physician's reputation and their own Healths. Let not the Patient think worse of himself than he is, nor place before his Eyes the imaginary Messengers of Death; but let him with a full hope relying on God expect better things: For the Plague, like an *Ignis fatuus*, pursues the Coward, and flies from Men of Courage.

All natural *Evacuations* and *Retentions* are to be regarded.

§. II. *Pharmaceutic Cure.*

NOW let us treat of the *Pharmaceutic Cure* of these *Malignant*, and *Pestilential Fevers*; which according to the old *Salernists* is threefold, *Curatory*, *Preservatory*, and *Vital*.

They place the Pestilence in an occult quality, that is destructive to Man, and which indicates a necessity of Antidotes, and they assert, That the cause of this Infection (whether it came in at the Mouth, or by the Pores, or any other way) is to be removed, and rooted out. Therefore if the *Plague* proceeds from Contagion, and the Body be

Plethorick, they are presently for Bleeding, even in the Beginning, before the first twelve hours are over; for when the strength of the Patient is worn out by the Malignity of the disease, they will not allow of it. The *Galenists* also admit not of Purging, unless when the first passages are foul, and then as occasion shall serve they administer Vomits. They judge that the safest way of Cure, is by Antidotes, which they will have repeated every twentifourth hour, and so to be continued for three days or more, till the force of the Infection or Poyson be dulled. They advise the Patient also not to Sleep till he hath sweat twice; and while he sweats, they give him Conserve of Roses, as also its Syrup, and the Syrup of Sorrel, juice of Citron, Pomgranates, and other Cordial waters; and to the Nostrils they hold some Aromaticks, and also sprinkle them about the Chamber.

After Sweating, if the Body be full of ill Humours, to help Nature in this Conflict, they advise the use of milder Purges, as the Syrup of Rhubarb, Tamarinds, Roses, *Pilul. Pestilential.* &c. They commend all Medicines in general that resist Putrefaction, and that are good against Malignant Fevers. So when a Fever is present, they advise only Coolers, as the Syrup of the juice of Citrons, Sorrel, Rasp-berries, Pomgranates, as also Pearls, Coral, precious Stones, &c.

Amongst Antidotes are these that follow: Treacle, Mithridate, *Diascordium Fracastorii*, *Tryphera Saracenica*, *Electuarium de ovo*; they say also that the Herb

Herb Butter-bur is excellent to discuss the Poyson by Sweat, *Electuarium de Gemmis*, and *Lactificans Galeni*, and six hundred others, of which they make a thousand Prescriptions, too tedious to be inserted here. But seeing that Nature, say they, very often drives some part of the infectious Poyson to the Circumference, or Superficies of the Body, and raiseth there certain Carbuncles and *Buboes*; if they arrive not to their due Maturity, and the Fever, with its Symptoms, abateth not, you must endeavour, as soon as may be, to expel the Poyson.

To which end they apply Vesicatories, and scarify the Skin, for the freer vent of the Poyson, and Malignant Humours. They also apply about the *Anus*, to the great benefit of the Patient, young Chickens, or Pigeons with the Feathers off, or a dry Toad steeped in Wine. As for the Ulcer, they say it is to be cured like other Ulcers, tho' tis not to be Consolidated till all the Poyson be Evacuated. For a Carbuncle, they say, it is to be presently Scarified, and indeed very deep, that the corrupt, malignant, stinking Humour may flow out. After that a Plaister is to be applyed, as *Emplastrum de fuligine*. Some commend here *Emplastrum de Magnete Arsenicali*. Some with a Sapphire draw a Circle round the Carbuncle, to prevent the spreading of the Poyson: and if the Carbuncle grows too big, and causeth great Pains, they are for opening a Vein just under it, for a freer passage thence of corrupt Blood: and to stifle the extraordinary heat, they make use of *Emplastrum de Cynoglossa*. But during the whole

Cure they advise the use of the milder Antidotes every day, lest the smallest Grain of Poyson should remain in the Body.

In *Pestilential* and *Malignant* Fevers they take the same course; for in this case they are puzzled where to begin first, or how the Malignity of the distemper may be taken away without increasing the Fever, or the Fever removed without any neglect of the Malignity; therefore they say, where the greatest danger is, the greatest care is to be used; hence also before the fourth day, they admit of Bleeding, Vesicatories, Purging, and Glysters. But they put the greatest confidence in Diaphoreticks, prescribing now and then between, certain Alteratives and Preparing Medicines, such as are Sorrel, *Scordium*, *Cardus Benedictus*, Vipers-grass, Citron-seed, Roots of Tormentil, Cinque-foyl, juice of Citron, English Currans, Raspberries, Pomgranates. Neither is the use of several Topicks to be neglected here, which you may meet with in any *Galenist*.

§. 12.

Paracelsus saith, that the Pestilence is a Disease that takes its Original from the Stars, whose Malignant Raies he accuseth; therefore every Physician should know what is the true cause and rise of every Disease. If it proceedeth from ill Diet, bad Drink, Herbs, or Fruits, it is then to be cured by some secret application of Herbs, and Roots. But if it proceedeth from Minerals, or Metals, it must be cured by some secret preparation of them: For here he admits not of

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the use of Simples or any preparation of Vegetables. So where the disease proceeds from the Influence of the Heavens, the secret virtues of Metals, & Minerals signify nothing, but the Cure is to be wrought by heavenly Influence Astronomically applied, as he teacheth *lib. de Persicaria*, and thence takes occasion to commend several Secrets.

§. 13.

Helmont, who will have the Plague to be a most acute, most violent, and quick Fever, asserts it may be cured without Bleeding or Purging, with the use only of Sudorifics, and drinking of pure Wine. He boldly advieth the use of Treacle in Wine, or *Aqua Vitæ*. Against the Infection, he Prescribeth the use of Sudorifics mixt with Antidotes. Therefore according to him all the Hope of a successful Cure, consists in the due Extermination of the Poyson by a due Sweat.

As to Preservatives, care is to be taken, that all fear, and Terroure be banished from the Spirit of the *Archæus*; for which end pure Wine taken to a degree of Mirth is very proper, because it in a manner stifles the force of Imagination for a while: for no Man is poor or wants any thing so long as he is elevated with Wine; but it is better for Prevention, than for Cure.

However he suppoeth that what may preserve from the Plague, may also cure it. One sort of Curative Remedy is that which annihilates the Pestilential Poyson, another is that which expels the Subject with the Poyson, and a third is that which takes away the Causes that dispose the Body

towards it. As for the Preservative, there is nothing more proper than that usual way of Purifying the Air according to *Hippocrates*, as in an Epidemical Plague, that the Pestilential Poyson in the Air being thus killed, and the Air it self brought to a healthy Constitution, the nourishing juice within us may not any ways be corrupted. But when that Sharp, and Malignant Poyson is once received into the Body, and as it were fixed in the *Archæus*, our Author saith, That those Medicines which are purely Preservative avail but little, by reason of the Activity of the Poyson. Therefore in the cure of this Disease, let care be taken chiefly, that the Body be actually hot, and the Pores continually open, and the Mind always cheerful and merry: For all sadness, saith he, is altogether to be avoided, not only as it is related to fear, but as it immediately produceth Corruption about the Orifice of the Stomach, which is the cause of all Sorrow. Therefore all sad, and Melancholy Objects are extremely to be avoided, as also all Melancholy sad discourses. Amongst absolute Preservatives, according to the opinion of our Author, Charms or Amulets are best. Lastly Sudorifics expel the Plague: for they entice forth the sad and Terrified *Archæus*, which otherwise retiring inwardly as to a Tower, would raise there sadness, sighs and Malignant heaviness. He saith also, that all Sudorifics are in a manner of the same Virtue, and differ only in degrees. He praiseth also among these the drink call'd *Hippocras*, with Ginger and black

Ivy-

Ivy-berries, as grateful to the Stomach. Alexetericks are to be given in strong Wine, and just after Eating, not to provoke Sweat, but to keep open the Pores. He commendeth small, and light Meals, for he saith, that in all Fevers, especially in a Plague, there is an Indigestion, therefore instead of allowing much Food, he adviseth a Draught of pure Wine.

As for Women with Child, in Child-bed, and those that have their monthly Courses, with whom this Disease is always most severe; because the *Archeus* of the Womb is in great disorder, and even overwhelm'd with sadness, he adviseth that the Womb be comforted with Oyl of Amber, or with Amber dissolved in the best Spirit of Wine that can be got, or with the Fume of the hard knots that grow on Horses Legs, let through a Sieve.

To Carbuncles and *Bubo's*, he applyeth a Toad prepared after his own way, and a Saphire Stone. For some say that if a Saphire or yellow Jacinth be applyed to the Part that is grieved one quarter of an hour, so that the place may feel the Influence of its Rayes, it will grow blew, in an hours time, which is an infallible sign of the Plague; but if otherwise, the Patient is free from the Plague. *Helmont* also commendeth Amber rubbed on the Wrists, as also a Jacinth and a Saphire used the same way.

§. 14.

WILLIS saith, That in the Plague, and other Contagious Fevers, Preservatives, as well as Remedies, are equally to be respected: As for the first, he recommendeth a good Diet, and

with *Helmont* Mirth, and Cheerfulness, because they fortify the *Archeus*. And in those that are Plethorick he allows of Bleeding, especially if they are used to it, for the more peaceably, and softly the Blood moveth in its Circulation, the longer 'tis before it is infected.

He believeth also that Amulets, tyed about the Neck or Wrists, have great Efficacy, and that from the mutual Sympathy of the *Effluvia's* on both sides. Hence also he commendeth those Amulets which are made of Arsenick, Quick-silver, and powder of Toads, and other poysonous things.

As to Pharmacy in this case, he is for carrying off the Malignant Matter by gentle Purges, next for fortifying the Body or Spirits with Antidotes taken every day.

In the cure of this most violent Disease, our Author very seldom or never admits of Bleeding, because the stock of Blood being too much Exhausted, sweating is not so easily promoted. Therefore instead of it, he commendeth Scarifications, and Vesicatories; against *Bubo's*, Carbuncles, and Ulcers coming from them, he adviseth Cataplasms, Fomentations, Plaisters, and Anointings, and many other external Applications, in which he usually mixeth some poysonous things, as the Oyl, and Balsam of Arsenick.

As for our Author's Medicines in the cure of the Plague, they are either such as evacuate, and so are design'd to carry off the sharp *Serum* of the Blood, together with the poysonous Particles that attend it, or else they are Antidotes; for those Medicines which are more general

general in their Evacuation, and that by stirring up the Blood, prevent Coagulation, preserve the Heart (the Cittadel of life) and keep the Enemy at a distance, by driving those corrupt Humors, and poysonous Ferments from the Center to the Circumference. All such Medicines, whether Purging, or Sudorifick, should consist of such Particles, as are rather of the nature of those infectious Particles that attend the Contagion, than of those that compose the Mass of Blood; for he is of opinion, that from this mutual likeness, the infectious Matter is the sooner carried off. Hence he recommends all Purges, Vomits and Sudorificks, which are prepared of Mercury, Antimony, Gold, Sulphur, Vitriol and Arsenick, which seeing they are not overcome by our natural heat, are admirable Remedies against the Pestilential Poyson.

Alexetericks, as Rue and *Scordium*, of Compounds, as Treacle, Mithridate, and *Diascordium*, inspire the blood and Humours with a new Ferment, and by keeping up a gentle and even Motion, prevent Coagulation or Putrefaction, dissipate the poysonous Particles, when they begin to croud together, and prevent their coming to a head, being as it were a constant guard to the Blood and Spirits against those Malignant Impressions. This Author therefore would have the Patient first Purge or Vomit, then Sweat, which he advises may be frequently repeated, with the constant use of Alexipharmacks intermixt, that with the free eruption of *Buboes*, or Carbuncles, all the Malignant Poyson may be expelled. Therefore the whole busi-

ness lies in expelling the Pestilential Matter, and in hindring its return.

As to Malignant Fevers, there are buttwo things to be considered, according to our Author, (*viz.*) the Malignity, and the Feverish Intemperature. Now the Remedies that cure the last, as Purging, Bleeding, and Cooling Medicines, encrease the Malignity, and make the Poyson spread further; as Antidotes, and Sudorificks, which resist Malignity, on the other side encrease the Fever. So the Prudential use of both is all that is to be considered here.

§. 15.

SPlusus, who placeth the cause of the Plague in a certain Lixivious sharp and volatil Salt, is for Medicines Preservative, and Curative. Whilst he visited those that were sick of this disease in *Amsterdam*, he armed himself with nothing else but a bit of Bread soak'd in a Spoonful of Wine-vinegar; but when he left off the use of Vinegar, he always felt some pain in his Head at his entring into any House that was infected. Therefore he commends all Acids, and condemns Spirituous things, as the Spirit of Wine, Treacle, &c. but for spirit of Salt, Sulphur, or Vitriol, he commends them highly: As he doth also Acid Fruits, as Citrons, Limons, Pomgranates, English Currans, &c. Those who likenot acids, he allows to temper them with the Spirit of Wine. So also he commends the following Composition.

Take

Take of the Conserve of Roses two Ounces, Flowers of Marigold, Rose-mary, Borage, Buglofs, Violets of each half an Ounce, Spirit of Vitriol enough to give it a pleasant tast, of which let a Man of a middle Age take fasting in the Morning, the bigness of a Wall-nut, a young Man less, and a Boy still less.

He commends also Syrups, and Lozenges made of acid Juices, as Crude Tartar, Cream of Tartar, or Tartar Vitriolated, in Broth or Wine.

For preventing the Plague, he doth not much esteem of Amulets or Charms, because it cannot be demonstrated how they act. Hence it is that he Laughs at the hanging of crude Mercury about the Neck in a Goose-quil, for the keeping off the Pestilent Matter.

As to the Cure, seeing that the Pestilential Poyson very often enters through the Pores of the Body, he is for driving it out the same way by Sudorificks. But when it is taken in by breathing, and mixing with the Spittle, corrupts it, which being swallowed, causeth a certain Nauseousness in the Stomach, then he very fitly adviseth an Antimonial Vomit: but when this Malignant Poyson is so fierce as to corrupt or destroy all parts that lie in its way, he prescribeth Medicines, that powerfully fix and temper Sharpness, or Acrimony, as fixed Sulphur (to wit) Metalline, or Mineral. By these Medicines also he will have the Choler that is sharpened by this Pestilential Poyson to be fixed.

He commends also all Acids, in respect they recover the Acid Juice that is dull'd and corrupted by the Pestilential Poyson, and in some degree correct and mend the Texture of the Blood. For Sudorificks he commends above others, *Theriaca Andromachi*, Mithridate, *Diascordium*, Orvietan, Treacle-Waters prepared with the Spirit of Wine, or distilled Vinegar. To these he addeth also some Preparations of Antimony, as *Antimonium Diaphoreticum*, *Bezoardicum Mineral*. as well the Simple, as the Solar, Lunar, &c. the golden Diaphoretick Sulphur, fixed Flowers of Antimony. As for Medicines that are more simple, he commendeth in general Fat or Sealed Earths, Bole Armenick, *Terra Lemnia*, *Silefiaca*, *Turcica*. Amongst Vegetables he commends the roots of Butter-bur, *Contrayerva*, *Angelica*, Tormential, Zedoary, the Leaves of *Carduus Benedictus*, *Scordium*, Centaury the less, Scabious; for Woods, *Guajacum*, Juniper, Box, Oak, Sassafras; Seeds of Elder, and dwarf-Elder; and also a Rob made of Juniper-berries. Remedies from Animals in this case, are the Bezoar-Stone, a Stone found in a Hogs Belly, and such like; as also all Horns, Bones, and Claws, and chiefly volatil Salts, and Oyls drawn from them, which are Sudorifick in a high degree.

To temper and moderate the Volatility and Lixivious Acrimony of this Pestilential Poyson, he commends Tartar above all things, and most of all the distilled Oyl thereof; so also for the fixing of volatil Salts he praiseth Salt-peter. For by this Salt, Arsenick, Orpiment,

ment, Antimony, and such things as consist of a volatil Salt are fixed : yet above the rest he commends Mineral Sulphur, artificially fix'd and prepared out of any Subject, which he calleth a most admirable Medicine in the Plague, or any other severe Distemper, on which he can surely rely. He commendeth all Acid Spirits, especially the more Simple, or those that are a little sweet'ned with the Spirit of Wine. From Animals he hath certain volatil, oily Salts, or Oyls distilled from Horns, Bones, or Hoofs. Amongst Acids he reckons fowre Milk, Butter-milk, Whey that is fowrish, juices of Sorrel, Wood-sorrel, the greater House-leek, Barberries, Citrons, Oranges, Pomgranates pressed out with unripe Grapes. Amongst Minerals, he commends all Acid Spirits, distilled from Salt, Nitre, Alum, Sulphur, or Vitriol. *Sylvius* says that three sorts of Medicines are sufficient in the Plague; first Vomitories, as often as occasion requires: secondly Sudorificks, but such as abound with volatil Salt, for the moderating or taking away the Acrimony of the Pestilential Poyson. Thirdly Acids, and among these he prefers the Spirit of Nitre, as endued with a fixing quality, but for security he adviseth mixing it with watery Medicines.

Therefore in the cure of the Plague, our Author asserts, that a Vomit of Antimony may be safely administred, that may be at the same time also Sudorifick, especially in the beginning, and if there be a Nauseousness, and if the Patient be strong : after Sweating he adviseth, that the sick Person be

refreshed with Acids, and Cordial Mixtures : but so long as any thing of the Plague remaineth, such Medicines that are good to fix volatil Salt, or to correct the Air, and to restore the acid, are to be used, lest the Poyson neglected, and left to it self should gain new Forces, and on a suddain oppress the Patient,

According to our Author, the Pestilential *Bubo's* are to be discussed, and if that cannot be, they must be brought to Maturity and Suppuration, after this, he saith, they are to be opened, cleansed, and at last consolidated, adding to the Medicines according to his advice, Treacle, or Mithridate, to which end he commends the distilled Oyl of Harts-horn, and other Medicines that abound with an oily volatil Salt.

He hath observed that *Unguentum Martiatum* with Treacle, hath been used in discussing with great success, as also *Emplastrum cum gummi compositum*. Unless the pains are very urgent, he is not for Scarifying the *Bubo's* too soon, much less for using Vesicatories, or Cupping-glasses. But if they are great, and burning, then he adviseth Cupping, and Scarifying, but never Vesicatories.

So soon as ever the *Bubo's* are suppurated, he is immediately for opening them with a Pen-knife or Lancet : to which when opened he administers *Balsamum Sulphuris Ansatum*, and mixed with Turpentine, together with *Unguentum Basilicon* and Treacle, and all this with great success, for thus the *Bubo* is soon cleansed. To bring an Escar over it, he useth *Emplastrum Diapompholigos*, and to

to prevent the encrease of the Carbuncle, as also a Mortification in the Neighbouring parts, he adviseth that the affected part be anointed up and down with the Butter of Antimony, or *Magnes Arsenicales*, and that the separated parts be cleansed with the anisated Balsam of Sulphur, together with a mixture of *Unguentum Tetrapharmacum* and *Basilicon*.

Sylvius prescribeth the same Medicines in Malignant Fevers; for he asserts that the volatil Salt sharpened, which is the cause of the Malignity, is mended and corrected by the same Medicines, (to wit) those Oyly ones, mixt with some acid, or some earthy substance, in which respect he allows of *Terra Sigillata*, all mineral and metallick Sulphur well and truly prepared, of Vitriol, Antimony, &c. to this end also he useth Treacle and *Disascordium*, and so to correct the sharper Salt, he useth all volatil, kind, and Oyly Salts. Here also all Sudorifics are convenient, inasmuch as they drive the Enemy out of Doors. To this end he commends the following Prescription.

Take of old Treacle two Drachms, *Antimonium Diaphoreticum* one Drachm, Syrup of *Cardus Benedictus* two Ounces, the prophylactick Water one Ounce, Cinnamon half an Ounce, Scabious two Ounces. Mix them. Let the Patient take the fourth, or fifth part of this, and dispose himself to Sweat, then half an hour after let him take one or two Spoonfuls more, and so on till he is in a gentle Sweat.

In the mean while if he is very thirsty, and his Tongue dry, he adviseth him to take a little Broth, with a little Limon or Orange juice, which will not only promote sweating, but also correct the Acrimony of the Salt. He seldom or never adviseth Vomits here, unless when any thing of that Salt sticks in the Stomach, or Guts, then he alloweth the milder Antimonial ones. He adviseth the frequent use of *Antimonium Diaphoreticum*, and *Bezoardicum*, with the intermixture of Acids, to recover the natural Consistency of the Blood, for which Pomgranates, Quinces, Oranges, and Juice of sower Grapes are very good.

§. 16.

NOW let us propose the cure of this Disease according to our *Own* Indications. There are two things that are chiefly to be considered in the cure of Malignant, and Pestilential Fevers (to wit) the *Intemperies*, or Indisposition, or the Malignity; one is cured by Alteratives, the other by Antidotes, yet neither without regard had to the Symptoms that occur.

The Remedies are Chirurgical, Pharmaceutical, or Dietetical: As to the first, Bleeding comes first to be considered, which is wholly to be omitted in a Malignant Fever, because it renders the Blood more sharp, and fluid; which yet *Sydenham* both in the *Plague* and Malignant Fevers allows of. Here also Vesicatories are to be considered, which we have known successfully used to the Feet, and Wrists. And tho by some they be

be called in question, yet in this case we rather trust to our own experience, as also that of other more famous Men, as, *Horstius*, *Riverius*, *Hæferus*, and others. We allow neither of Purges, nor Vomits, and whatsoever others suggest to the contrary, we have experience on our sides, without any contradiction of Reason. Vomits will do no good unless immediately at the beginning when the Stomach is full. Glysters also I do not much approve of. In time of Infection there must be great care of Eating before taking an Antidote, for I have known several escape of the Plague, who before either Sleeping, or Eating have taken an Alexipharmack; on the other side, several have dyed, who have slept or Eat before the use of any Antidote, in spite of the stoutest Remedies that have been Administred afterwards.

But nothing in this case answers your Sudorifick Antidotes, yet in respect of the Fever, the hotter sort are not to be used; which if they do any good, it is by chance, to wit, by the Benefit of Perspiration; for the poysonous Particles being grown sharp, and troublesome, are hereby thrown forth. Therefore the first thing we do, is to set upon the Malignity, which is conquered by the more fixed sort of Bezoardicks; nor do we tarry for that Concoction which *Hippocrates* speaks of. The milder Antidotes we use here, are the Powders prepared of *Antimonium Diaphoreticum*, *Mina solaris*, *lunaris*, Metalline Earths, to which we always add a little Camphore. The best compound Powders, are the *Hungarian Pow-*

der, and the red *Saxon powder*, as also the Bezoardick powder of *Sennertus*, as also others, as of *Carduus Benedictus*, Worm-wood, Rue, *Nitrum Antimoniatum*, the Saphire stone, which however we do not rely on alone. Here also those Antidotes are proper, which are commonly said to resist Putrefaction, as *Theriaca Andromachi*, *Damocrates's Mithridate*, *Fracastorius's Diacordium*, the Celestial Treacle, Citron-Treacle. All Medicines made of Sulphur, Salt, Aloes, and Myrrh are convenient; as also all viperous Medicines. But the volatil Salt of Vipers ought to be fixed, and prescribed so; it is fixed by the Spirit of Vitriol. Such a Remedy, as this that follows may be used.

Take of the Treacle of *Andromachus* a Scruple, Powder of Crabs-claws six Grains, of Saffron three Grains, *Carduus*-water two Ounces, *Sylvius's* Prophylactick-water half an Ounce, *Syrupus Liberans* three Drachms. Mix it, and give it.

That English powder of Crabs-claws, with some passeth for a great Secret, which is as followeth.

Take of prepared Pearl, Crabs-eyes, red Coral, the whitest Amber, Harts-horn, the Eastern Bezoar-stone of each half an Ounce, of the powder of the black Tips of Crabs-claws to the Weight of all the rest.

Let the Powder be made according to Art, which may be given

in a Gelly of Vipers, or little Balls made thereof, carefully dry'd and kept for Use. Amber Medicines with Cinnabar are good in this case, in which there is a gentle Sudorifick virtue. The following drink is excellent.

Take of native Cinnabar, Harts-horn, Flowers of Sulphur, the back Bone of a Serpent of each a Scruple. Mix them.

The Cinnabar of Antimony with a few Grains of *Magister Anodyn.* is an excellent Remedy, it may be given, even to those that are like to dye, with the Bezoar-Stone, or *Pulvis Pannonicus*. But if Vomiting should happen, as it often does in these Pestilential Hungarian Fevers, with Dr. Sydenham, I am for deferring or not administering any Medicine, till even by the very Weight of the Cloths the Patient begins to Sweat. For when the Morbifick matter advanceth towards the *Superficies* of the Body, the Flux of the Belly, and the Vomiting, caused by those Rays turned inward, and falling upon the Stomach and Guts, cease of their own accord; so that let the Stomach be never so discomposed before, it afterwards retaineth the Medicine, and produceth those Sweats according to your desire, or intention. Let the following Powder be given often at several times.

Take of Myrrh, Root of Zedoary, the Bark of Citron of each half an Ounce, Cinnabar of Antimony a Scruple, Camphore half a Scruple, Oyl of Amber, and Mint of each a drop. Mix

them into a Powder. The Dose is from a Scruple to half a Drachm: Or,

Take *Unicornu fossil.* a Drachm, the Magistery of Lead a Scruple, of Myrrh a Scruple, Camphore five Grains. Divide them into two equal parts, and give it with the Prophylactick-water of *Sylvius*, which may be repeated in six or eight hours, though a Sweat doth not always follow, till it be manifest that the Enemy is beaten, and Nature remains Victorious.

In the mean while let the Patient be refresh'd with a slice of Citron a little Sugar'd, and let his Broths be well season'd with Acids; for they befriend the Blood, and powerfully resist Poyson, defending the Animal and Vital Spirits, from all Assaults. Great care is to be taken always of the worser Symptoms, especially a Flux or Looseness; therefore to kill two Birds with one Stone, Bezoardicks are to be mixed with such Medicines as strengthen the Bowels and Entrails: so you will answer both Intentions. Let the following Powder therefore be given, or such like.

Take of *Terra Sigillata*, *Gafcon's* Powder of each a Scruple. Mix them for one Dose. Or,

Take of the *Diascordium* of *Fracastrorius* a Drachm, Germaner-water two Ounces and a half, *Species Hyacinthi* a Scruple, Syrup of Fumitory half an Ounce. Mix it, and give it.

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These and such like are to be given as oft as there is occasion, for provoking of Sweat. So also cure is to be taken of the strength of the Patient, for which Intention the following Prescription is good.

Take of the Water of the whole Citron, *Scordium*, black Cherries of each two Ounces, of the cool Cordial-water of *Hercules Saxonie* half an Ounce, prepared Pearl a Drachm and a half, Harts-horn burnt and prepared two Drachms, Crystal of Sugar enough to season it, or render it grateful. Mix it.

A Mucilage of Quince-seeds corrects the dryness of the Tongue, as also the Gelly of Harts-horn, likewise the red Water for the Mouth, with which it should be often washed. Against excessive Watchings, Almond Emulsions are very good, as also Oyntments, and Plasters applied to the Temples, and Wrists.

For Weakness or Fainting Fits, the usual Pearl-water is very proper, and also the following Epithem applied to the Heart, and Wrists.

Take of the Cordial Water *pro Epithem*. Rose-water of each an Ounce, Carbuncle half an Ounce, the Spirit of the Rind of Citron three Drachms, Bezoardick Vinegar distilled two Drachms. Mix 'em, and give it.

These things premised, let us

now treat of the Cure of the Plague or Pestilence, that fierce and horrible Disease, for which we think all those things mentioned in the cure of Malignant Fevers to be very proper, and that what is destructive in one case is so in the other. Bleeding therefore, and Purges, Vomits and Glysters, as also spirituous, and hotter Cordials we reject, and do not much approve of Alexipharmacks, but we choose out only some gentle Alexetericks and Bezoardicks. Yet before we treat of the Cure of this Disease, we shall say something of the way to prevent it, and preserve the Body free from it, which consists in shunning infected Air, and in having a cheerful Mind, which if we cannot do, let us correct the Air, and arm our Bodies against the Enemy as well as we can. Nothing corrects the Air so much as clear Fires of the Wood of Juniper, or Fir, Pitch-Barrels; and amongst Suffumigations, Brimstone, and especially Bezoardick Vinegars are very good. Thus in *Hippocrates's* time the Plague raging through all Greece, was kept off by Publick Fires. Therefore let the Air be clear from all Stinks, and let there be made in every House Suffumigations of Brimstone, and Gunpowder, as was mentioned before. A courageous and quiet Mind is the best Preservative, hence the *Turks* with more than Stoick fate, take no notice of the Plague, nor do they avoid the Company of those that are infected.

As for Amulets or Charms, in this case we are for those that are prepared of Toads, out of the Eyes and Nostrils of which, when hung

hung up, there creep certain Worms, which, as *Helmont* saith, are a good Preservative against the Plague. In imitation of which the excellent *Irmherus* prepared certain Trochiscs, which many have found very wholesome and efficacious. Some commend Arsenick, others Mercury; which yet in the Plague at *Nimeguen* failed *Diemerbroeck*, and in that at *London*, Dr. *Hodges*. You may prepare safer of Native Cinnabar, and the Root of Meadow Saffron. As to those Charms which some call *Talisman*, I leave them to the Astrologers. Yet this is to be said of Charms, That in the Plague at *Dresden*, they were found to have no force nor Efficacy; whence many, not without great reason, begin to doubt of their so much talk'd of Operation. Now let us in short consider Inward Medicines, amongst which strong Wine moderately taken hath the chief place, by which Remedy the famous *Diemerbroeck* preserved himself in the Plague at *Nimeguen*, which the famous *Waldsindius*, chief Physician and Publick Professor at *Marpurg*, hath tryed as well as I, who when for several years he visited those that were Sick of the Plague, took always a few Spoonfuls of Wine fasting; and by this Remedy alone, and God's Assistance escap'd the Contagion. Thus also *Sylvius* with a little Marigold-Vinegar, and a bit of Bread preserv'd himself. There are several other things which deserve Commendation in this case, as *Angelica*, Zedoary, Carline Thistle-root, so first called from *Charles* the Great, Emperour of the *Romans*, and first of that Name, whose Army was preserved from the Plague

by the use of this Root, the Virtue of which an Angel taught them; from whence to this very Day it is said to preserve against Contagion, and therefore it's good when chewed in the Mouth; the Root of Masterwort also, Galangal, Citron peel, Cinnamon, Myrrh, &c. are well esteem'd; but let those that use them take care they swallow not those Powders when chewed, since it is most certain, that the Infection insinuates it self into them: therefore in the Plague-time the Spittle ought never to be swallowed. There is nothing fortifieth the Spirits so much against this most fierce and cruel Disease, as the use of Bezoardicks, whose number by the diligence of Physicians is well encreased, amongst which all those that are compos'd of Treacle, are excellent, especially *Theriaca Cœlestis*, *Theriaca Camphorata*; here all Odoriferous things do good also; thus we see Flies, and other Insects are driven away with the smell of the Spirit or Oyl of Turpentine. Others extremely commend Diaphoretick Gold, Oyl of Camphore, D. *Michael's* Bezoardick Tincture, the nitrated Tincture of Sulphur, the Essence of Vipers; others commend other things. Thus a certain Apothecary for *Lucre's* sake went into the most infectious places, and visited those that were Sick courageously, preserving himself free from Contagion by the Spirit of Urine. *Mynsicht's* Tinctura *Vitæ*, is an admirable Preservative. But who, I pray, shall or can reckon up all things used in this case?

Chirurgery affordeth us a more excellent and noble Amulet in the

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use of Issues; these truly according to mine, and others experience have done great things, nor have Vesicatories done less good, tho the use of them is not much allowed in the Flux of the Hæmorrhoids, the monthly Courses, nor to those that are with Child; and very weak.

Now for the Cure it self, where in the first place, as we said before, we exclude Bleeding, which some at *Erfurt*, during the Plague, celebrated to the great hazard of the Patient's Life. He that desires Witnelles in this case, let him Consult *Parvus*, *Massa*, *Andernæus*, *Foalech*, *Forestus*; amongst the Moderns, *Paul de Sorbais*, *Waldsmidius* and others; for it's certain, that by Bleeding the Fermentation of the Blood is increased, to the destruction of the Patient; wherefore I very much wonder the famous *English* Practitioner, Dr. *Sydenham*, hath approved of Bleeding in this case, as well by reasons, as experience.

Upon the same Account, we reject Scarifications also.

These things premised, you are to know, that as soon as the fountain of Life is assaulted by this Malignant Enemy, it is necessary to bring immediate assistance to the Animal Spirits. For this most acute Disease destroyeth like the flying of a Dart, unless prevented by immediate and present Remedies. The Signs therefore of Contagion appearing, the whole Cure depends on the immediate use of Antidotes, before the Poyson hath perverted the whole Mass of Blood, and Coagulated it like Whey. For when once the Animal Spirits, and the Region or Citadel of life are pos-

sessed by this dreadful Enemy, all human helps are in a manner vain. Here, were it not too tedious, I could produce a World of Bezoardicks. Fossil Unicorn, in respect it hath an Astringent Force joyned with a Bezoardick Virtue, and that it also imbibes the caustick Salt, stopping Looseness, Dysenteries, Convulsions, and other Symptoms in the Plague, as *Francis Joel* in his Treatise of the Plague, testifieth is much commended. The Dose is from half a Scruple to a Scruple, which Virtues, as some believe, *Lapis Stellaris* hath, as also the Earth of *Lemnos*, and all Sealed Earths. Thus *Bezoarticum Saturninum* is accounted of great Virtue, whose description the famous *Hoffman* in his *Clavis Scroderiana* delivers of Antimonial, and Sulphureous, as also Camphorated, Cinnabarine, Succinated, Volatil Balsamicks; wherefore several Prescriptions are to be seen of this Nature. The best are those that follow, which the famous *Etmullerus* has had great experience of; (to wit) the Oyl of Amber Camphorated from Nine Grains to twenty in Germander-water, or the Propylactick of *Sylvius Helmsius's* Antipestilential Oyl, which is prepared of the Oyl of Amber Camphore, &c. *Regler's* Camphorated Electuary is praised by him also, by reason of the great virtues it hath. You have here the Prescription, but something Corrected.

Take sweet Almonds husk'd an Ounce, beat them in a Stone-Mortar, add an Ounce and a half of Camphore, white Sugarcandy two Ounces, Powder of Ginger half an Ounce, Scorge-

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nera Root an Ounce and a half, *Virginian Snake-weed* an Ounce, *Contrayerva* three Drachms, *Scordium* two Drachms, red Coral prepared two Ounces, Oriental Pearl a Drachm, true Unicorn half a Drachm, Bone of a Stags Heart half a Drachm, *Andromachus's Treacle* equal to the Weight of all. Make an Electuary.

Our preserving Powder is as followeth.

Take *Montagnana* and *Mantuan's* Powder of each two Drachms, *Species liberan.* *Hyacinthi* of each a Drachm, Root of *Virginian Snake-weed* and *Camphore* of each a Drachm and a half, Flowers of Sulphur half a Drachm, *Antimonium Diaphoreticum* a Drachm. Mix them to a Powder. The Dose is from half a Drachm to a Drachm.

We much esteem in this case all Preparations of Animals, Minerals and Antimonials, especially among volatil Salts we prefer above all other, *Liquor Cornu Cervi Succinatus*, and the English Balsam given to twenty Drops or more. All Acids abounding with a volatil Sulphureous Principle are good here, which do not only bridle the wild and sharp *Effluvium's* of the Spirits, and in a manner stop or fix their Motion, but by Coagulation prevent the weakening or dissolution of the Mass of Blood; for this Reason also the volatil Spirit of Vitriol is also wholesome; there are several Tinctures prepared of Emeralds and other Minerals. Thus the

stinking Spirit of Sulphur plentifully expels those nasty sweats that flow from the Body in the Plague, and other Malignant Fevers, thereby preserving the Spirits from all danger of the Enemy.

All Medicines prepared of the Blood, and Stomach of a Stork are praised in the Plague, by reason of some Alexeterick Virtue contained in them; because those Birds feed upon Snakes and Vipers. Medicines of Elecampane and Valerian are the best in this Case; therefore they are put into the Composition of the Bezoardick Tincture, which is used very much in Malignant Fevers, Plague, and other Diseases. The following Alexipharmack Elixir is not to be despised.

Take of the Spirit of Juniper-berries prepared by Fermentation half a pound, Root of *Virginian Snake weed*, *Valerian* of each two Ounces, *Saffron*, *Myrrh* of each half an Ounce. Extract the Essence thereof, in which dissolve Oyl of Amber, and Camphore. Mix it for an Elixir. The Dose is from Five Drops to Ten.

Or,

Take of the Rob of Juniper a pound, *Flos Sulphuris* four Ounces, white Ginger two Ounces, Powder of Citron-peel, Root of *Virginian Snake-weed* of each half an Ounce, red Myrrh an Ounce, Camphore six Ounces, Opium dissolved in Vinegar two Drachms, Treacle-Vinegar an Ounce and a half. Mix it into an Electuary, which will both preserve

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from the Plague, and cure it:

These are the more Noble Medicines, by the assistance of which the Enemy is to be destroyed.

Anoint the Region of the Heart and the Wrists, with the following Anti-pestilential, or such like Balsam.

Take of the Oyl of Amber Camphorated a Drachm, Rue, *Angelica*, Citron peel of each a Scruple. With the Oyl of Nutmeg make a Balsam of a just Consistency.

The following Plaister applied to the Heart, and Wrists, as well in other Malignant Diseases as in the Plague, they say, hath been tryed with great Success.

Take of Venice Turpentine an Ounce, melt it in a Copper Kettle, add to it twenty live great Spiders, work it up, and down with a wooden *Spatula*, till the Spiders appear white or greyish, and can scarce be discerned, then add of the Powder of Toads-flesh dryed half an Ounce, Crude Sulphur an Ounce, Savine two Drachms, *Matthichus's* Oyl of Scorpions a sufficient quantity. Stir them altogether with a wooden *Spatula*, till they be of a fit Consistency to make a Plaister of.

But it will be better, if you put in Toads prepared after the *Dish Butler's* way.

It seemeth needless to treat farther of the Symptoms of this Di-

sease, for it being rightly cured, they vanish of their own accord.

But we give a general caution against the unseasonable use of Anodines, Hypnoticks, or any other Medicines which may be used to take away Thirst, Flux of the Belly, Hæmorrhagies, or Dysenteries; for thus the Motion of Nature may be hindred, to the irreparable prejudice of the Patient.

As for *Buboes*, Carbuncles, and Spots, the most common Symptoms that attend the Plague, in bringing the *Buboes* to Perfection and Maturity, there is no remedy comparable to Dr. *Hodges's* Plaister, or the Magnetick Plaister of *Angelus Sala*. For this end, Pigeons, Hens, especially live Swallows, and dryed Toads, may be applied to the *Buboes*, as also Gentian, or Root of Virginian Snake-weed mixed with Treacle in form of a Cataplasim, for it draws out all the Poyson. Others commend Cupping, and Scarifying, yet with little benefit to the Patient; nay, by this means the Pains are encreased, the Symptoms exasperated, and their Cure is hindred. Therefore the best and safest thing in this case, is the applying of Cataplasims made of Treacle, the Crum of White bread, Linseed, Elder-flowers, Figs, Chamomil, Yelks of Eggs, Saffron, and such like, moist with Honey, or boyled in Milk and applied to the *Buboes*. Antidotes may also be mix'd, that the Venom may be the better extirpated; as Treacle with Onions roasted in the Ashes; or such as are prepared of the Powder of Toads, Honey, Rue and Bean Flower; or, of the Roots of Marsh-Mallows, white Lilies, Corn-

fry, the five Emollient Herbs, Scabious, One-berry, Rue, &c.

But if these things do no good, you may safely apply Veficatories, which cannot be sufficiently commended.

As Carbuncles are more dangerous than *Buboes*, so they are to be handled with greater Diligence. And with all speed imaginable they are to be ripened, and their Caustick Acrimony is to be corrected lest it should spread further. To which purpose besides Actual Cauteries, which I abhor, and Potential ones, (but they must be Veficatories) I commend *Emplastrum Arsenicale Magneticum*; and *Diemerbroeck's* Cataplasm, together with a Treacle *Lixivium*, is worth all the rest in

hindring the Carbuncle from Ganguening. The Eschars are to be separated with Digestives, after that the Ulcer is to be plyed with Abstergents, Digestives, Cleansers and Defensatives, lest the Poyson either go back or spread further; whereupon very often great Pieces of Flesh fall off, to which end in Ulcers I much esteem *Balsamum Sulphuris Anisatum*, or *Succinatum*, or *Terebinthinatum*, Balsam of *Peyru*. Some draw a Sapphire Stone about the Swelling, and no Pus or Poyson appears any more. For healing it, we commend *Emplastrum Saturninum Mynsichti*, mixt with *Mercurius dulcis*, *Sricticum Crollii*, *Oppodeldoch*, *Diapalma*, and the like.

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CHAP.

C H A P. VI.

Of the Small Pox and Measles.

§. I.

WE, as well as *Wallis*, place the Small Pox and Measles next to the Tribe of Pestilential and Malignant Fevers; which indeed are mixt Diseases, being both according and contrary to our Natures. As to their Original, they have their Seminary connate with our selves: And as to their Effects, they produce poysonous Symptoms, which usually occur in the Plague. And because the Small Pox usually invade all Mankind indifferently, we may upon very good Grounds suspect a common Cause, or Seminary, contracted in the Mothers Womb, and connate to every Man, which for some season lies buried in some solid Part, till having got an opportunity of breaking out, it bursts out of its lurking Hole, and being mixt with the Mass of Blood, it produces terrible Symptoms, and often-times Death: Thus we oftner dye, than are born, from the very Womb. I saw a Child born with the Small Pox, of a great Lady, wherewith the Mother had been afflicted and marked. Yea, you can scarce find one in a thousand, who all his Life long remains free.

We shall retain our old Method, and briefly touch upon the Etymology. The Small Pox are called *Variolæ*, either from *variando*, because they vary or alter the Skin, or (which is more likely) from *Vari*, Pimples, because they are little Pimples, tho usually they surpass Pimples in Magnitude. The *Italians* call the Measles, *the little Plague*. Dictionary-Writers use the Word *Variolus* for the Fish we call a Trout. We in this place think the Word *Variolæ* should be taken in its most usual Signification, meaning by it those *Exanthemata* or Pimples, which by way of *Crisis* break out in the Skin, and suppurate, with a Malignant Fever, usually attended with several Symptoms. The *French* call them *La petite verole* or *Morbilli*.

By the Measles, we mean those red Spots, that break out with less protuberance, and an itching in the Skin, generally with a Fever, which yet are sooner dissolved, and without suppuration. The *French* call them *Rougeole*. *Martianus* calls them *Resaliæ*. Ancient Authors make no mention of the Small Pox: Wherefore Dr. *Sydenham* thinks, that Diseases have certain Periods, according to those occult, and hitherto unaccountable alterations,

alterations, which happen in the Bowels of the Earth, to wit, according to its various Age and duration, just as there were some Diseases formerly, as the Leprosie, which are now lost.

Description.

THE Small Pox therefore are a new sort of Disease, which are described to be *Sanious Pustules, or little Abscesses, in the Skin especially, that are thrust out into the Ambient of the Body, like Lees from new Wine, by some common Cause, breeding a disturbance in the Heterogeneous Particles of the Mass of Blood, which till then lay hid in the solid Parts, with a great Effervescence of the Blood, intending as it were a critical Motion of Nature, rising with a Continual Fever, a Cough, difficulty of Breathing, want of Sleep, fright in their Sleep, and a subsequent Suppuration.*

The Measles are red, dry, and broader spots arising in the same Parts, from the same, but a little more volatil and sharp Matter; sometimes with more violent Symptoms and Fever, without Suppuration, which disappear by insensible Transpiration.

Difference.

THE Fevers, that attend these *Exanthemata*, are not always of the same Nature, but as they depend upon, so they are regulated by the Turgescence of the Matter, which disturbs the mixture of the Blood; sometimes more, sometimes less. Wherefore all Small Pox are not Malignant, but respectively there be some that are benign.

The common People have given them different Names from the diversity of the Pustules and their Matter.

I am not ignorant indeed, that there is a question, whether the Small Pox be always attended with a Fever, or no? And I know, that Authors differ much in their Opinions and that some of them would prove by Arguments, drawn from Reason and Experience, That the Small Pox may break out without any Fever at all. But to confess ingenuously what I think, I can see no solid reason, whereby to establish this opinion of theirs. Therefore I am rather of the contrary opinion, that is, That there are no Small Pox without a Fever. For since the Small Pox are raised by way of *Crisis*, and indeed by means of a great Effervescence of Blood, which cannot be done without disturbance, nor by consequent without a Fever, any one may from thence easily gather, That the Small Pox cannot come without a Fever. I do confess indeed, I have seen several Children afflicted with the Small Pox, who complained neither of a feverish Heat, nor of any other grievous Symptom, but played, and eat and drank well, and were as quiet, as if no ill had befallen them. But here it must be observed, that this does not happen, but in such as have a very few, because of the paucity of the matter, & no violent Effervescence of Blood; or perhaps they were not sick of the true Small Pox. Thus I have seen Children taken with an Ephemera Fever, and a Tertian Ague, who have play'd in the very Fit.

§. 2. Part affected.

NOW Order directs us to the search of the Subject. And the primary Adæquate Subject in these Diseases, if we look on the *Exanthemata*, is the Skin, with its Cuticle, the shoar of the Microcosm, which are full of infinite Glands and Tubes; for there is the end of the Vessels, and there the fence of the Blood is observed, which receives all the refuse of the Blood and these *Exanthemata*. That part of the Skin therefore which is thinnest and hottest is most susceptible of these Sanious Pustules, which is the reason why they shew themselves more in the Back, than in the Face, Hands, and Feet. Therefore Physicians ought immediately to look on the Back, and that at the beginning, that they may be the more ascertained whether they be there. *Riverius de febr. pestilent. cap. 1. pag. 549.* reckons, that the Measles break out most in the Breat and Back, because these parts are the Emunctories of the Liver, to which he attributes the greatest share of Segregation: but he is out. Neither the Eyes, nor Ears; nay, and what is more, nor the Inner parts of the Body, to wit, the *Viscera*. Lungs, Diaphragm, Stomach, &c. are free from them. Which *Viscera* in such as dyed of the Small Pox, I have seen black and corrupt; yea, I have observed very black Small Pox as it were growing to the inner Membrane.

As to the Subject of the Cause, or of Infection, it is the Mass of Blood, and the *Lympha*; yea, all the solid Parts, wherein the Se-

minary lies buried, from whence these Sanious *Exanthemata*, which are so fatal to many, having got an occasion of breaking out, do bud: Nor do we exclude the Glands.

§. 3. Diagnostick.

BUT that it may appear, what the Patient ails, and whether he is troubled with the Small Pox or Measles, there is need of Diagnostick Signs, on the knowledge whereof depends the Scrutiny of the Causes, and the Foundation of Cure.

The general Signs therefore of the Small Pox and the Measles being imminent or to be feared, are, if a hot and moist Winter have gone before, that is, if the wind have been Southerly, which causes divers alterations in the Air. And hitherto it has been my observation, that they rage more in the Spring time.

But the Signs of the Small Pox being in any one individual to be attended are the essentially inherent ones. For at this Day here lies the greatest error, that the Physicians do not at the beginning immediately know that the Small Pox are coming. Thus in the most powerful *Ferdinand* the Fifth, elected and Crowned King of the *Romans*, who dyed of the Small Pox in the Month of *July*, 1654. the Physicians at first took it not for the Small Pox, but for a Tertian Ague, because there were presently *Deliria*, Tremblings, &c. therefore the cure succeeded ill. Wherefore Patients, if there be but the least suspicion of the Small Pox, must be asked, whether they have ever had this Disease, or if they have been,

been where those that had them were, if they have but cast their Eyes on them, and have been put in a fright thereby. I have an Example of a Gentlewoman, the Mother of three Children, who having never had the Small Pox, and looking on a Child whose Face was much disfigured with them, she straightway went home, fell sick of them, and dyed within fix Days.

It will appear by the following Signs, that the Small Pox are either present or at hand. First, there is a gentle, sharp heat, with a frequent Pulse, which heat holds a Man continually and equably without Intermission, or not without an equable Exacerbation, with a previous Shivering, painful Lassitude, notable Languishing, and pain in the Back and Loyns; on the second or third day there is usually a Fever attended with its Symptoms, to wit, Thirst, Head-ach, Loathing, Vomiting, &c. The Small Pox and Measles use generally to appear about the middle of the second day, more follow on the third, and the fourth they appear in full Body. And in this Case not only the Face must be looked on, but the whole Body must be laid naked, especially the Back, in which a slow, yet a happy Corruption often happens, when the Fever hastens from the Augment to its State. But it is best with *Sylvius* to suspend ones judgment till the third day.

In Children and other People before they appear, there precede Loathing, Vomiting, and oftentimes Tremblings, Convulsions and Epilepsies. And when they are come forth, the Patient is exceeding

Thirsty, and his Mouth is dry; nor will plentiful drinking cool his hot *Viscera*, in others it is gentler, and sometimes it is wanting. In the vital Faculty there is observed a Palpitation of the Heart, difficulty and quickness of Breathing, as if it were Strangling, Anxieties about the Heart, Swooning, a quick Pulse, which is often observed in the temporal Arteries. In the Animal Faculty there is Head-ach, want of Sleep; sometimes in the beginning unquiet Sleep, with Fright and *Delirium*, Convulsive Motions with Gnashing of Teeth, Lethargy, &c. The Belly is, as it were on purpose, Costive for three, four, five, or sometimes more Days.

In the Skin there preceeds a great Itching, with a pricking all over the Body, the Eyes are red, they water, and are dim, the Nose itches, and they sneeze, and bleed at Nose, the Ears tingle, there is Hoarseness, & a dry Cough, as also frequent Stretching and Yawning. When they come out, at first the Skin is a little rough and moist, then on the third or fourth day red Spots appear thick all over the Skin, most on the Back at first, afterwards on the Belly and Face; they encrease by degrees, and breed *Sanies*, usually till about the eleventh day, at which time, the Matter being all driven out, and gathered by degrees, they begin to dry and turn into Scabs, and Scales.

But the Measles, as they appear sooner, so they decrease sooner, so that the worst is over on the fourth, sixth or ninth day. The *Menses* come extraordinarily, they spit abundance of ferous Matter all the time of the Disease, and this Salivati-

on puts the Patients to much trouble; sometimes they spit Pus, wherefore this Disease often ends in a Consumption. Oftentimes the Nose bleeds; the Urine is Red, thin, and sometimes turbid; sometimes it is like theirs that are in Health, by the alteration of which several Pils-prophets boast how they can foretel when the Small Pox or Measles are coming. Yet all these Symptoms are not found in all Persons; but according to the greater or less quantity of the peccant Ferment, the Symptoms appear greater or less. In the Measles all the foresaid Symptoms appear more mild, than in the Small Pox; and at first they cannot easily be distinguished the one from the other, unless you will guess from common Contagion, whether it will prove the Small Pox or Measles.

§. 4. Cause.

IFever we are in the Dark, certainly it is in the knowledge of Causes, so that we may well say,

Felix qui rerum potuit cognoscere causas.

Hence it is most certainly true what Hippocrates says, *lib. de flatibus*: He that knows the cause of a Disease certainly, from things which are in the Body, having got the knowledge of Diseases by contraries, may easily give such things as will do good. For if in other things we are blind for want of Light, without all doubt here we are blinded in the Sun. Therefore first of all let us prosecute the

cause of our disease according to the Opinion and Principles of the *Salernitans*. *Galen's* Disciples say, That these are no new Diseases, because they arise from a very ancient Cause, the Impurities of the Blood lurking in Children's Bodies; which the *Arabians* knew. But *Hippocrates*, and the Champion for Dogmatical Physicians, *Galen*, and other ancient Physicians make no mention of them. *Galen's* Followers hold, That Blood is the true cause of the Small Pox and Measles, because there is not one in a thousand, who has them not before he dies. But they do not think, That these Menstrual Impurities remain in the Body substantially, for this reason, because by long tarrying they must needs corrupt and putrefy, but they say, that only some bad quality is imprinted on the parts of the *Fetus*, which at length infecting some part of the Humors, grows troublesome to Nature, which at length rising up drives these infected parts to the Skin, which is the reason, why the Small Pox and Measles happen at ripeness of Years, and sometimes in old Age. They make a two-fold Excrement in the Mass of Blood, the one thick, the other thin. From the thick they ridiculously hold, That the Small Pox are bred; from the thin, the Measles. And they, as well as the Moderns, hold, That the Expulsion of the Small Pox and Measles is made by an Ebullition of the Blood; and according to *Avicenna's* Doctrine, they make a Two-fold Ebullition, one Perfective, another Corruptive. They call that *Perfective* or *Depuration*, in which only the impurer and excrementitious

crementitious parts of the Blood putrefy, and are purged out by Nature, that the whole Mass may afterwards be left pure: and then they reckon the Small Pox safe, which are cured without any Medical help. They call that *Corruptive*, in which not only the Excrementitious parts of the Blood, but the pure Blood it self putrefies; whence they hold, that dangerous and mortal Small Pox arise, and they judge, that such an Ebullition happens when they are Epidemical, and are produced by a Malignant Constitution of the Air, by which the Effervescence and Malignant Putrefaction of the Humors are caused, whence they say many and dangerous Small Pox are bred, which sometimes are fore-runners of the Plague, as *Rhases* thinks. The *Galenists* reckon the Small Pox and Measles among acute Diseases, ending usually within fourteen days. The *Arabians*, and their Master *Ebessina*, reckon the Universal cause of this Disease to be the Food, especially that wherewith Children are nourished in their Mother's Womb.

§. 5.

THE *Paracelsists* seek the Proximate Cause of the Small Pox in Sulphur, Salt and Mercury.

§. 6.

Helmont will not admit the foresaid Nourishment of the Menstruous Blood to be the cause of the Small Pox, because when the *Fetus* is nourished, it is

not Menstruous; but he says that they rather arise from Poyson, wherewith the Blood is infected, the Essence of which Poyson is not demonstrable *a priori*, but it resembles the property of Poyson by the Effects. He therefore thinks, That the cause of the Small Pox is an Exorbitance of the *Archæus*: for while the Ambient Air breaths some Endemial mischief, then the *Archæus*, who is quickly affected by what is Ambient, being impatient of a Malignant Air, breeds a peculiar Poyson in it self, which has such properties. He thinks this Poyson is bred about the Stomach.

§. 7.

Willis de febris cap.
15. does with the *Arabians* place the Proximate Cause in a Pollution of the Menstruous Blood at the time of Formation in the Mothers Womb. In which he holds, That a certain Ferment is bred, which being communicated to the Mass of Blood, gathers Vigor, and afterwards at set Periods procures a Turgescence and Superfluous excretion of Blood. For at the time of Conception, when the *Menstrua* are altogether stopt, he says, That much of this Ferment is bestowed on the *Fetus*, and its Heterogeneous Particles, as something foreign, is blided with the Humors and Mass of Blood, in which they lye entangled, till the Particles are moved by some evident Cause, then they Ferment with the Blood, and cause an Ebullition, and then a Coagulation, whereby most of the Symptoms in this Disease are produced.

duced. He says, that these Fermentative Seeds are sometimes few and mild, and so entangled with other little Bodies, that they cannot easily get loose; but he holds, that in others they are more and stronger, so that upon any slight occasion they are ripened into this Disease.

Hence he judges, that some have the Small Pox in their Infancy, others later, and not till they are well in years: some are apt to take the Contagion, others converse with the Sick without danger.

And he assigns a Three-fold evident Cause which stirs up these fermentative Seeds; to wit, Contagion, Disposition, and immoderate Disturbance of Blood. That this Disease is produced by Contagion he proves from daily Experience; because *Effluvia* continually go from the infected, which being received by other Bodies, do presently, like Poyson, ferment with the Blood, and so according to him they raise the latent Seeds of this disease, and things Homogeneous to them, and dispose them into an *Idea* of this disease. Secondly, a peculiar Disposition of the Air is able to produce the Small Pox; hence it often grows Popular, and rages over whole Countries and Cities. Hence also they come oftenest in Spring and Autumn, because, as he says, at these times especially divers Tumultuous Particles fly up and down the Air, which we draw in with our Breath, and thence divers Effervescencies of the Humors and Blood, and *Idea's* of diseases are raised. Thirdly, altho there were no Contagion, and no Malignant Constitution of Air did precede, yet he has seen this disease produced by excessive Com-

motion and Disturbance of the Blood and Humors, when no Body else has been sick in the whole Country. For who is there that will not allow, That without any previous Infection the occult Seeds may easily be brought into Act by excessive heat of the Blood?

He compares the manner of their production to the working of new Wine; as that throws off the *Faces*, so the Effervescence of the Blood separates the unprofitable Excrements. He says, that Portions of the congealed Blood and Poyson break out about the fourth day; sometimes sooner, sometimes later; for the Coagulation of the Blood is not caused presently, but after some distance of time, wherein the Poyson shews it self and the Effervescence ferments the Blood. First of all, small Portions of the tainted Blood, and few in number, like Flea-bites, rise in the Skin, then come more, and the gathering of coagulated Blood encreases, then they rise, and those Spots which were at first red, as they gradually encrease, grow White. If the extravasated Blood with the Poyson, by Heat and Stagnation turn into *Pus*, about the seventh day the white Swellings dry into a Scab, that is, when the thinner part of the Matter is evaporated the rest grows hard, which, when the Cuticle is extended through and broken, scale off. These and other very pretty things you may find concerning this disease in that Author.

§. 8.

SPIGNIUS denies that these *Exanthemata* have their Rise from corrupt menstuous Blood, gathered about the Womb, during a a Womans being with Child, some part of it being translated to the *Fœtus*, and at length, sometimes sooner, sometimes later, severed from the rest of the Ma's, and forced to the Surface of the Body: But he rather is of Opinion, That the Antecedent Cause of the Small Pox lies in the Glands of the Kidneys, oftentimes stirred up by any Procatartick Cause. And he attributes the proximate Cause of the Small Pox sometimes to a Saline Lixivious Acrimony, as in a Gangreen and Gangrenous Spots, such as are found in the Plague, and they are black and blew; sometimes to an acid Acrimony, in which, though he makes no question but the part may be corrupted, yet there is no Mortification or Blackness, but rather Whiteness; sometimes to a mixt Acrimony. He says moreover, that an ill affected Air is often the Procatartick cause, which is the reason why the Small Pox are so often Epidemick. He derives it also from peculiar Food, and he holds, That fear may be the Procatartick cause of the Small Pox, as the Plague and other grievous Diseases are observed to be produced by it.

§. 9.

SOME of the *Cartesians*, among whom is *Georgius Hornius in Arca Mosis p. 121.* derive the pedigree of the Small Pox from a Nameleis Poyson, peculiar only to Mankind. *Mercurialis* proves by several reasons, That Small Pox come by paternal Inheritance from the Blood and Ichorous Matter that is Ebullient in Bodies through heat. He also derives the first growth of the Small Pox, from some Universal fault in the Air; but at this day he thinks the Transplantation is Hereditary. *Kircherus* refers the original of the Small Pox to the live Image of Death, or animated Putrefaction. *Langius* seems to be of his Opinion, who says, That the *Exanthemata* are nothing else but Receptacles and Lodgings of Verminous *Effluvia*. But he divides the vanity of Menstuous Reliques, or Impurities left by the Mother's Blood. *Fernelius* derives their Original from some Occult Influence of the Stars. *Dyghy* seems to place the Cause of this Disease in the Blood, that remains in the Umbilical Vessels after the Birth. And there are some who hold it comes from the use of *Venus* after once Conception is over.

§. 10.

THAT therefore we may Extricate our selves out of these Meanders, we will give Our own Judgment, which when we have once proved all other opinions will fall of themselves. We enquire not therefore, as several do, for the Proximate

Proximate Cause of the Small Pox in the Pollution of the Blood. For from the Ancient *Hypothesis* it is false, that the *Fœtus* is nourished in the Womb by the menstuous Blood of the Woman, and the Seed of the Man. And it appears also from the experience of the modern Anatomists, That Conception is not made just before the *Menses*, nor when they are actually come, but when they are over, to the end that the Vessels of the Womb being then a little lax, the Mans Seed, or according to *Harvey*, the Genital Air of Mans Seed may pass through them to the Mass of Blood. Then in my Opinion the Womans Eggs do open, in other Mens fructify, and when they are so opened or fructified, they may be sent by the *Ductus Fallopi-ani* into the Cavity of the Womb.

Etmüller's opinion is more probable, who holds, That there is a certain Principle implanted in us, in regard whereof no Man can escape the Small Pox; the cause of it he derives from the Nutritive Milk, sucked by Children, as well in as out of their Mother's Womb, in as much as this, after the manner of all things made of Milk, is apt to corrupt, and turn to an Acid, Saline Liquor, and this lies under a Viscidity a long time, yea, several years, in the Vessels and other places, which Acid after it has been hid for some time, at length, when occasion is given either by the Air, Contagion or Food, or any other Non-natural thing being extrinsically by the like ferment communicated to the Maternal Blood, raises pernicious Febrile Effervescencies. I admire how hitherto several learned Men could

be so sollicitous about a sort of Ferment bred in the Mothers Womb, either through some fault in the Menstruous Blood, or in the Milk, when nevertheless to me it seems, with deference to better judgements, that this Disease comes as other Fevers do. For let us but consider the frequency of a Fever, does not every one in a manner fall into it at one time or another as well as into the Small Pox? And the reason, why the Small Pox seize Children more than grown Persons, I am perswaded, is this, Because Children not only in the Womb, but when they are out of it, are nourished with Milk, whereby the frame of the Blood is rendred weak, and apt to coagulate, hence upon any occasion given either by the Air, Contagion or Food, the Blood undergoes an alteration, hereupon this fermentative Acid contends with the volatil Salt of the Mass of Blood, till the Enemy, to wit, that vitious Acid lodged in the *Serum*, be precipitated and subdued by the Spirits, which when it is precipitated, is by means of the intercutaneous Glands successively thrown up into Pustules, and so at length turns to Pus, and the Skin, being eroded by the same, turns to a hard Crust, like a Scab, That there is an Acid the Pits do testify which remain in ones Face, as long as one lives, and the Malignant Ulcers likewise, which spread far and near, and sometimes erode the Vessels of the Lungs, and so produce a Consumption, according as the Acid is more or less Virulent. Let us suppose, that our Blood above all other Animals is best constituted of sulphurous

phureous, balsamick and serous Parts, and that partly through variety of Food, but especially through eating of Milk and Flesh it gathers abundance of Excrementitious fermentescible Particles, that the Body naked in it self, and infinitely full of Pores, does continually transpire, which Transpiration when it is hindred, especially by a Southerly Air, it is apparent that both other sorts of Fevers, and these Exanthematical ones may readily arise; and so the reason of the thing is apparent, without any fault of the Nutritive Milk, or of the Excrement contracted in the Mothers Womb. The Corrosion of the Bones in the Small Pox testifies that a Corrosive Acid is peccant in the case, as I had a sad Spectacle at *Limburgh* of a poor Boy, whose Bones were more corroded by the Small Pox, than ever I saw any ones by the Great. So from this corroding Acid we may derive Convulsive Motions, and the Epilepsy, as Symptoms frequently attending the Small Pox: for it contracts the Nerves, and raises disordered and impetuous Motions, which often make a Concuision in the whole Machine. But let this be observed, that by an Acid we do not mean every Acid that is peccant in our Bodies, because these have a great Latitude; for we must imagine there is one in the Gout, another in the Epilepsy, another in Chronical diseases, one in the Measles and another in the Small Pox; but they differ in their manner, so that one is more fixt, another more volatil, one of another Specifick tast, constituting this or the other thing, which to us, as well as others,

is inexplicable. Yet I suspect that the Small Pox come of a volatil Acido-Saline, as appears from the Contagion, which cannot be expected from a fixt Acid.

Since Infants therefore both in regard of their Place and Food undergo a great change, it cannot otherwise be, but that some notable alteration must be made in the Blood, which, since alone it is not always sufficient to disturb the mixture of the Blood, by reason of the dulness and weakness of the Ferment to make an Effervescence, lies quiet for a time wrapt up in kindly, serous, balsamick, sulphureous Particles, till it is stirred up by the Air or some other occasional Causes. Wherefore, since the Seeds or Ferments of such diseases may lye harmlesly in peoples Bodies for a time, there is a question among Authors, but it is *de lana Caprina*, how the Seeds of Fevers, especially of Spotted ones, and of some others can lye hid; have we not our Blood from our Nativity so disposed, that upon occasion given, it must undergo many Mutations, Coagulations, Fusions, &c. We deny not, that Poyson may lye hid under Viscidity for a long time in the Body: For experience, and the Monuments of Physicians testify, that the Poyson of a Mad Dog has lain hid for many years. And as much is evident from that preparation of a powder among the *French*, which they call *la Poudre de Succession*, which Poysons may lye a year and more in the Body, before they shew their Spite. I suspect it is Arsenick prepared after some peculiar manner, which afterwards recovers its virtue again from the Air,

Air, as by the effect I proved lately in a Dog: And so Diaphoretick Antimony with Time acquires its Sting, as does *Mercury* given to Patients for the Venereal disease, or outwardly applyed, which I have observed lye in the Body for six years, and then re-assume its Malice; for it cast the Patient into an Epilepsy, and at last it killed him. Nay, the same Poyson given to several Persons does not kill them all at the same Moment; sometimes these fermentative Seeds abound and are strong in the Air, wherefore they did not formerly lye in the Blood: for the Seeds neither of the Plague nor of any other Malignant Fevers preexist in the Blood. Some are sooner, others later taken with the Small Pox, some are difficultly, others easily infected, according as the disposition of the Blood differs. When these Particles are put in Motion, Nature fearing a total dissolution, does with all her Ability drive out those volatil foreign Salts, that are mixt with the Sulphureous Ichoreous Particles of the Blood, and cause all the disturbance to the *Superficies* of the Body, and so clarifies the Blood. Now in this Separation and Turgescence, while the Acid Particles of the *Serum* fight with the volatil, sanguineous ones, the mixture of the Blood must of necessity be hurt: Hence a Fever does generally or always attend our disease, for the more the Blood is disturbed, the more Malignant is the Fever. How the Blood is Turgescent, may be seen in *Willis*, and it is apparent from that Mechanical and Natural Depuration of a Vegetable Juice, that is, Wine.

We will explain a few Symptoms, and we shall find them generally flow from one Fountain, namely, an Acido-Saline, or a sharp, Corrosive ferment. It is apparent from what has been and shall be said, That there is an Acid, and that it transforms it self into different Symptoms, according to the diversity of the parts, where it is Predominant. When it falls on the Nervous kind and the Membranes of the Brain, then the Fibres of the Nerves are Convulse; hence come Head-aches, want of Sleep, Phrensies, the Epilepsy, Pains in the Back and other Symptoms. When it falls in the Mass of Blood, through the intestine strife, and disturbed mixture, several Febrile Symptoms, a disordered Pulse, Palpitation of the Heart, and Anxieties are produced. When it mixes with the fermental *Lympha* in the Glands of the Stomach, it irritates the upper Orifice, and so causes Squeamishness, and Vomiting. If it falls on the *Fauces*, it causes drought, and by consequent Thirst. If on the *aspera Arteria*, it causes a Cough, Hoarseness, and other faults of the Organs of Respiration, till it is thrown off by three ways of Evacuation; namely, the more volatil parts of it by the Subcutaneous Glands, where it turns to little Ulcers; the more fixt partly by the Kidneys in Turbulent Urine, partly by the Guts in yellow stinking Stools.

The mediate Causes of this disease, are the Causes Natural and Non-natural, of which hereafter, when we treat of Diet.

But before we proceed any further, Why does this Disease invade such as are of Kin? We answer,

That

That this may happen without any hereditary fault; for since People of Consanguinity are usually of an equal temper of Blood, and of an equal Motion of Humors, what wonder is it, when any occasional cause, especially the Air, the chief Author of all Epidemick diseases, so disposes them, if they be taken with the like disease?

§. 11. Diagnostick.

According to Hippocrates *f. 2. Aph. 19.* In an Acute Fever Predictions of Life and Death are not altogether certain; since therefore an acute Fever attends these *Exanthemata*, I think we should be cautious about the Prediction. When the Small Pox and Measles seize grown People, the danger is greater, than if they take Children, according to *Aph. 39. f. 2.* & the disease is more dangerous in Autumn and Winter, than in Spring and Summer. Such to whose Family they have been destructive, are in greatest Hazard; they are worse for Fat people than for Lean. They are very dangerous in Women with Child; nevertheless we must consider the strength of Nature in such: for I have known some Women who have Mis-carried in them without much harm. This may be a reason, because the Febrile Effervescence lasts not so long in them as in other Continual and Acute Fevers, but abates upon their coming out; wherefore the Mouths of the Vessels are not so much opened, nor the Hemorrhage of the Womb so contrary to Nature's intention. The Small Pox, which

seize and kill abundance at the same time, are more dangerous, than when they seize here and there one, for the greater the Malignity the more the Danger.

If many black and blew Spots arise, especially in the middle of the Small Pox, or between them, they argue great Malignity, and consequently danger. But when the Symptoms are mild in appearance, we must not thence conclude about the Nature of this disease; because there is often a Snake in the Grass, and a secret Malignity. Nor must a Physician be frightened, if bad Symptoms appear at the Beginning, to wit, Phrenzy, Convulsions, Epilepsies, &c. because the time before the *Crisis* is always grievous: but if these Symptoms exceed the bounds of Nature, they portend death, or danger at least. If after Eruption these grievous Symptoms abate, there is good hope: If the Fever return, and Epileptick Fits come afterwards, the Cure is Mortal. If the Febrile heat abate not after the fourth day; or when the Pimples come out, if it abate not a little, there is danger. Also if the heat abate sooner than it should, it is not able to expel the Heterogeneous taint from the Blood, and then Men dye. Therefore we must always be cautious, and not give cooling Emulsions at the Beginning, be the Thirst never so great. Otherwise we kill the Patient. Neither must Patients be kept too hot, for then you stifle them.

Difficulty of Breathing and Hoarseness, according to Hippocrates 4. *Aph. 50.* is of ill Portent. Want of Thirst, or of Appetite, after the coming out of the Small

H h h

Pox

Pox or Measles, argues danger. A Phrensy at the Beginning without Laughter, and not amending by Sleep, indecent lying naked, not knowing ones Friends, Trembling, Convulsions, Swooning, Grating ones Teeth, Want of Sleep, as they are bad Signs, so, as we have said, before and in the Eruption they are often harmless; but if they come after Eruption, we may boldly pronounce them Mortal. As to the Pustules, the sooner they come out, which is usually on the third or fourth day, the better, then they encrease successively till the eleventh day, and suppurate in Small Pox. On the contrary, if they come not out well, or if they strike in unseasonably; if they dye away presently, and the swelling abate immediately, without any abatement of the Symptoms and heat, all these things argue Malignity and Death.

The Flux of the *Menses* coming upon the Eruption of the Small Pox, is generally held to be dangerous; but I observed it in one of the Princesses of *Nassau* without any danger. Loosenesses also at the time of Eruption are generally reckoned bad; yet I have seen several escape in such a Looseness: However, black, bloody, green and stinking Stools, are reckoned bad by all Men. But in general, it is better to be Costive than Loose. If the Looseness give way to Treacle Bezoardicks, all may prove well.

A dry Cough is worse than when one raises something; thick Spit is bad; a bloody one is not always bad. Plentiful bleeding at the Nose before, and at the coming out is good, and lessens the quan-

tity of the Small Pox. Excretive Sweats are good, waiting and cold ones are bad, according to *Hippocrates* 4. *aph.* 37. Chilness of the extrem Parts is bad also in the Small Pox, according to 7. *aph.* 1. Livid, violet coloured, or black Small Pox are worse than red or yellow, and denote greater Malignity. So brown and black Spots mixt with the Small Pox are a bad Sign. Distinct, round, pickled Small Pox, and which come out all at once, also soft and clear ones are good. The Small Pox after the manner of acute diseases are at the height in fourteen days. And the reason why the Measles are over sooner, usually on the seventh day, is the Volatility of the Humors; but then they are often attended with more grievous Symptoms. The Small Pox are worst, which affect the Inwards; whence come Consumptions, Dysenteries, Quinsies, Gangreen, Mortification: Sometimes the peccant Matter is transmitted by Nature to some Nerve or other, whence sometimes comes Blindness, Deafness, loss of Speech, as I lately observed in a Village near *Hanover*, called *Hockstat*, where a Girl of seven years became Dumb, who, to her Parents comfort, towards the latter end of Summer, recovered her Speech.

§. 12. Dietetick Cure.

NOW we come to the Cure. The Dietetick consists in a due *Regimen* of the six Non-naturals. The *Air* therefore must be moderately hot. Women therefore do ill, who, by heating Chambers too much, kill more than they Cure.

Cure But an over cold one must be avoided; because oftentimes it hinders Nature's Motion, by shutting the Pores of the Skin, so that the Small Pox cannot come out. Therefore Patients must not expose themselves in the Declension too soon to the cold Air, lest they Relapse. Some advise the covering People with a red Cloth. Others will have a Sheep or a Goat kept in the Chamber, according to *Riversius, prax. l. 7. de variolis et morbillis.*

As for *Meat* and *Drink* Oat-meal and Barley-grewel, with Raisins, is good, especially if it be sharpened with juice of Citron, which is a secret in this disease, Gelly of Harts horn, sweet and tart. For *Drink*, sometimes only a Decoction of Barley, with burnt Harts-horn and *Scorzonera*, is sufficient, or the things following may be put in Beer.

Take of Flowers of Bugloss, Borage, Violets, Marigolds, Columbine, Pansies each one handful, Shavings of Harts-horn half a Drachm, Gum-lacca two Drachms, *Album Græcum* half an Ounce, (this may be omitted for nice Patients) a handful of these in Powder, may be put every other day in Beer. Or, a *Nodus* may be made of Columbine-seed, *Terra Sigillata*, and Harts-horn Philosophically prepared. Or, which is better, drop into Small-beer, well wrought, Tincture of Columbine sharpened with Spirit of Vitriol, or Nitre, or Bezoartick Tincture, or of *Terra Catechu*; For we cannot well deny them Drink to quench their Thirst.

Flesh and Fish, salt, sharp, sweet aromattick things, all horary Fruits, New Wines and all manner of Drink not well clarified, must wholly be avoided; yet a few Spoonfuls of red Wine may be allowed.

Motion and *Rest* must be moderate, but *Rest* is most eligible.

One must not go to *Sleep* before he take a Bezoardick, and let him wake moderately. And the Patient should not take his Bed, till they are come out six days.

The *Belly*, before they are perfectly come out, though it be Costive, must not be unseasonably loosened, concerning which see *Langius dissertat. de Morbil. §. 99. et Sequ.*

All *Passions* of the Mind must be avoided, especially Fear, by which I have known several fall into this Disease: So Care and Sorrow must be avoided. I think Joy is the best: For a quiet Mind in this Disease as well as in the Plague, is the best preservative.

§. 13. Pharmaceutick Cure.

NOW we shall, as formerly we have done, give you the Pharmaceutick Cure according to the Mind of the *Galensists*. And they begin with bleeding, before the fourth day, or the Small Pox break out; especially if upon the coming of them out, there be a violent Fever, Restlessness, and Difficulty of Breathing, If the Urine be thick and red. They repeat it in elder Children, especially if the Fever be high or any other Symptom. The *Paris* Physicians

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forbear

forbear not young Children at the Breast. So ne, instead of bleeding advise Cupping for Timorous People. Before the Small Pox come out, if there be a Cacochymy, the Ancients advise Purging: But if they be coming, or already come out, they suspect it. Therefore they give only gentle things, such as Rhubarb, Cassia, Manna, Tamarinds, Syrup of Roses solutive, &c. After bleeding, and other Evacuations, they say, the coming out of the Small Pox must be promoted; to which end they advise not only Specifick Medicines, which drive the Humors to the Skin, but Diaphoreticks also and Alexipharmacks; especially if the Small Pox be Epidemical, and they commend the common and well known Remedy of *Rhazes*, *Avicenna*, and the whole Family of the *Arabians*.

Take of fat Figs seven Ounces, Lentils husked two Drachms, Lacca two Drachms and a half, Gum tragacanth, Fenil-seed each two Drachms. Boyl them in a Pint and a half of Spring-water, till a third part remain. Give a little with ones drink.

Or they Prescribe the following Julep.

Take of Root of *Scorzonera*, Sorrel each one Ounce, Harts-horn half an Ounce, leaves of Scabious, *Scordium*, *St. John's Wort*, each one handful, fat Figs six, Gum-Lacca three Drachms, Seed of Turnep, *Cardus Benedictus* each two Drachms, Lentils excorticated half an Ounce. Gum-tragacanth a Drachm and

an half. Boyl them to a pound and an half. To three Ounces of the Colature add one Ounce of Syrup of Limons. Mix them. Give it twice or thrice a Day.

If the Malignity be violent, they think we should insist on Alexipharmacks. For which end, they commend *Confectio de Hyacintho*, Bezoar-stone, Coral, Pearl, Harts-horn, Oyl of Scorpions, and other things; nor will they omit Corroborators, both Internal and External through the whole course of the disease. As for the special cure of the Symptom, see *Riverius de Variolis & Morbillis*.

§. 14.

Paracelsus and *Helmont* endeavour to cure this Disease by their *Arcana*. For *Helmont* accounts the principal Indication to be the appeasing of the *Archeus*, which he procures by his depurative *Arcana*. Among these *Mercurius Diaphoreticus* is not the meanest, with which he boasts how he has cured a Fever at once giving.

§. 15.

Willus, as the course of the Disease has three times, so he accommodates three several Intentions to each of them. Therefore for the first four or five days, before the Small Pox appear, and the Blood begins to boyl and Ferment, he either vomits or purges; yet he advises gentle Medicines, lest the Fermentation be made too high. If there be a *Plethora* he allows of bleeding.

Secondly, when the Small Pox appear

appear, he advises a gentle Sweat, that the Blood may gently ferment. And to defend the Throat, he commends a Decoction of Figs, Marigold Flowers and Harts-horn in Beer or Posset-Drink; and he gives moderate Cordials several times in a day. But he says, all hot and strong things should then be forborn. Then he advises the Omission of bleeding and purging. To defend the Throat he applies a stay quilted with Saffron and dipt in Woman's Milk, to which end he uses Gargarisms and Mouth-water. He orders the Eyes to be defended with Rose-water, Womans Milk, Saffron and such things applied by way of Cataplasm.

When the disease is in the Declension, and the Small Pox begin to wither and turn to a Scab, he says, the danger is usually over; yet he will have a spare Diet kept, and without Flesh. And when the Patient is able to walk, he gives a Purge three or four times, to carry off the Filth, left in the Bowels and Blood. Afterwards he allows a higher Diet.

§. 16.

Splivus is for Prevention, when the Small Pox are Epidemick, or several in one House are taken with them, and there are others remaining, who have not had them. In this case he would have Children that are well, to be carried from such as are infected, into a wholesomer Air, in which there are no Small Pox. But if the Small Pox be kindly, he is against change of Air. And so for Prevention sake, he thinks, That divers and grateful Purges should be

given, according to the diversity of the Humors.

But as soon as the Head-ach, with the rest of the Symptoms of the Small Pox at that time, appears, he says, we must take care, if Blood abound, to breath a Vein, and take a convenient quantity of Blood away. And then within an hour or two after bleeding he would have the peccant Humor carried off that way it enclines; when there is loathing, by Vomit; when there is a desire to go to Stool, and a disturbance in the Belly, by Stool; and when there is a Sweating, he would have the peccant Matter carried off by Sudorificks; and above all others he commends Antimonials, because they cleanse the Blood; and he advises the Repetition of the same several days, especially when there is no Fever, and the Small Pox are come out, and the Symptoms are almost abated: then he says, That *Antimonium Diaphoreticum*, and *Bezoarticum Minerale*, are noble Medicines; next to which are divers sealed Earths, Bole-Armenick, *Terra Lemnia*, Bezoar-stone, Unicorn of all sorts, Ivory, Harts horn, and especially gentle volatil Salts.

As for Externals, he commends all such as temper heat, when the Small Pox tend to Suppuration. Among which he commends Mutton broth, Hogs greafe, Pork and Bacon, with which he would have the Small Pox anoynted all over; And if an Apostem any where be feared, he ties to *Balsamus anisatus*, *succinatus*, or Balsam of Juniper.

When the Eye lids are hurt, or the *Tunica Cornea* fretted, he commends Womans Milk, with Saffron

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fron and Rose-water. But before this Epitheme he prefers the juice of Chervil, with a little Rose and Fenil-water applied with a Linen Cloth doubled to the Eyes. In other diseases of the Eyes and a *Pannus* he says sharp things are good in a Cataplasin.

If the Small Pox cause an Inflammation in the Ears, he highly extols Spirit of Wine and *Sal Ammoniack*, poured into the Crum of White-bread, while it is hot, and applied hot: also a Decoction of Wormwood, lesser Centaury, Southernwood, and any other Aromatick Plant, put into the Ear hot; he commends likewise any Balsam of Sulphur, if a few drops be put into the Ear with a Feather.

In Shortness of Breath and a Cough he magnifies Antimonial Medicines, especially Diaphoreticks, and gentle volatil Salts.

§. 17.

HAVING given you a taste of these things, now we will proceed to our own Method of Cure. As for prevention, first of all, Air and Contagion must be avoided, then the Body must be kept free from all Filth. Gentle Purges may be given to carry off the vicious Acid. The noble *Digby* accounts it an Universal Preservative, if when a Child is born, the Blood that is in the Navil-string, when cut, be washed off with Wine; but I have tried it hitherto to no purpose.

I have found gentle Acids, and Absorbents, especially with Myrrh in them, very effectual in preserving several Bodies.

As to the Cure it self, these things following must be observed. One

Cure must be insisted on in the distinct, another in the flux Small Pox; because in these the Fever as well as other Symptoms torments the Patients for several days after the Pustules are come out; but in the distinct the Symptoms are not so violent. Since there are three notable times of this disease, the Beginning, to wit, the first Moment of the Febrile Invasion; the time of Eruption and Suppuration of the Pustules; and the third time from the state of the disease, till the Small Pox dry away and fall off, three curative Intentions also must be accommodated to every one of these. That all things therefore may proceed aright, a thin Diet, as we said before, must be observed through the whole course of the disease, observing a few things peculiarly. But above all things it is necessary, that the Patient avoid over-heating himself in Bed, as that famous Practitioner Dr. Sydenham testifies, who holds, That more dye of keeping too hot than too cold. For as Fruit too soon ripe is good for nothing, so no good comes of keeping too hot. It must ever therefore be our care, that an even Tenor of Ebullition be maintained in the Blood; and we should have a care chiefly for the first six days, especially if the Patient be in the Flower of his Age, or have exalted his Blood with high drinking, or if it be Spring or Summer time. The Patient must not be kept too hot with Cloths, nor with a Stove, he must forbear hot Cordials: for oftentimes, the longer Nature is in endeavouring Separation, so that the Effervescence do not quite cease, the surer the Separation is. Therefore

Therefore here we forbid Purges, Clysters, Vomits, and Bleeding. For by these Evacuations the Effervescence is not only too much abated, by means whereof in the mean time, the Parts to be purged off, should have been separated; but that very thing is carried off, which should have supplied the Secretion begun. Neither is it our Intention here, to expose the Patient to the Cold: However the most proper degree of heat to promote their expulsion, must be natural. But if upon bleeding unseasonably, or taking of Cold, the Pustules strike in, then I think we should use gentle Cordials; yet we must have a care, that we exceed not in the use of them. Therefore I think, all hot things should be avoided for the first days; since generally People in the Small Pox dye Phrenitick. For this reason at the Beginning we forbid our Patients the open Air, Wine and Flesh; and for their drink we allow them small Beer medicated. For their Diet, we admit, as we said before, of Oat-meal and Barly-grewel, Apples, and Milk, by the last of which I have seen Country Peoples Children cured, when all other things were omitted. Truly it is the safest way for the first six days to forbear Expellers and Sudorifics, and to give gentle Acids, such as Tincture of Columbine, of the Cordial Flowers, and juice of Citron. The famous *Waldsindius* knows how to make an excellent Spirit against the Small Pox, which he has hitherto used with vast Success; so that not one, who ever took it in time, dyed of the Small Pox. And he adds nothing more, but that he recommends

gentle Bezoardicks with Myrrh in a small dose to some on the seventh, eighth and ninth day. I have seen so many effects of this Spirit, that I dare boldly say, no one for the future could dye of the Small Pox, if so be he used but this Medicine, and avoided the heat of the Bed for the first days. Certain it is, that several have dyed of too-hot a Regiment: for we have observed that Pissing of Blood, purple Spots, Phrensy, Apoplexy and Death it self have risen from the unseasonable use of Cordials. The Blood takes time for separation; and if we hasten it, it will prove Abortive. Therefore at first all Precipitants must be avoided, till upon the Ebullition being finished, Separation be made in the Blood.

On the fifth day you may confine your Patient to his Bed, and give him some gentle Cordial: For instance;

Take of *Diafcardium* one Drachm, Water of *Scorzonera* one Ounce and an half, *Cordialis Herc Sax. frig.* half an Ounce, *Syrupus Acetositis Citri* two Drachms. Mix them for one Dose. Or, Take of water of *Cardus Benedictus*, *Scordium* each one Ounce and an half, liquid *Laudanum* fifteen Grains. Mix and give it.

Or give the following Expulsive Water.

Take of Root of *Contrayerva*, *Scorzonera*, Fenil each half an Ounce, leaves of Scabious, *Scordium*, Flowers of Pansy's, Columbine, Marigold, Bugloss, Vi-

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olets each half an handful, shavings of Harts-horn six Drachms, Gum-lacca two Drachms, Seeds of Columbine half an Ounce. Infuse and destil them, with Decoction of Lentils what is sufficient. Make an Expulsive Water, of which take two or three Spoonfuls once in six Hours.

Or,
Take of *Extractum Theriacale* Ten Trains, *Terra Sigillata*, Irish Slate each one Scruple. Mix them. Make a powder. Divide it into two equal parts. Give it in Cordial Water.

Or,
Take of Seed of Columbine, Turnep, *Carduus Benedictus* each two Drachms, with Water of Fumitory and *Scorzonera*. Make an Emulsion.

You may give to the Poor half a Drachm of Columbine Seed; or according to *Ettmuller's* mind this following.

Take of *Antimonium Diaphoreticum* or *Mercur. vitæ parat.* one Scruple, Myrrh five Grains, Castor two Grains. Mix them. Make a Powder, and divide it into two equal parts.

But because these Powders are bitter, and are loathsome to young Children, we cheat them with the following drops; and the success is as good; Essence of Myrrh or Castor Alkalifate. Or before the Extraction, it is well imbibed with Oyl of Tartar *per deliquium*. We may mix *Elixir proprietatis sine acido* with watry Vehicles, and so give it with Success. For we commend Myrrh as a Medicine confir-

med by many Experiments in the Small Pox and Measles; and we may call Essence of Myrrh, *Tinctura Salutaris*. So likewise we recommend Essence of Castor, as well Simple, as Compound of Castor and *Affa Fœtida*, with tartarizate Spirit of Wine, as a preservative and curative Medicine. An Infusion of Horse-dung is admirable good in ones ordinary drink. *Ettmuller* prefers the use of Sheeps-dung in the Small Pox and Measles. Authors commend the *Glossapetra* of *Maltha* for their Bezo-artick virtue above oriental Bezoar it self. We prefer Irish Slate before it, wherewith we have done more good, than with oriental Bezoar. The Dose is from half a Scruple to a Drachm. So *Saccharum*, and *Magisterium Saturni* given inwardly, do in this case wonderfully qualify the Acid of the Mass of Blood and *Lympha*. For their Use is excellent in all internal Inflammations. Here also *Diaphoreticum Regulinum* will do good, and *Antimonium Diaphoreticum* with Harts-horn in Emulsions, adding a little Myrrh, will be an excellent Expeller.

And when the Pustules are come out, it ought diligently to be considered, whether the Small Pox be Distinct or Confluent; which one may easily know by the greatness of the Pustules, their Paucity, slow Eruption, and want of violent Symptoms: for such are of the distinct kind. In this case, when they are come out, Cordials may be given, and a little hotter Diet may be allowed, Parado will be proper. The Confluent are dangerous; and here the Physician has an opportunity to show his Skill, and

and what the Art of Physick can do. We know indeed, that the Small Pox are reckoned among diseases that Women cure; but how many do they kill, especially of such as have the Confluent? And it is a doleful thing in this Age of ours, wherein Women prescribe to Physicians, and they recommend Mithridate, or *Diafscordium*, or Bezoar, which if a Physician will not allow of, then they rail at and curse him. Since therefore after the ninth day by the Suppuration of so many *Buboes* a new Fever, and that a continual one, is raised, which often kills the Patient on the eleventh or thirteenth day, gentle Acids must again be given frequently. On the seventh, eighth and ninth days gentle Bezoardicks with Myrrh may be given. Therefore the Eruption of the Pustules being so made and promoted, and the heat of the Body abating, we must endeavour a third thing, that the ripening of them may be finished, which we may easily obtain by often giving of Antimoni-ate, earthy Medicines, adding a little Myrrh. Here is a receipt.

Take of Crabs-eyes one Scruple,
Terra Sigillata half a Scruple,
 Myrrh six Grains. Mix and give it. Hereby the work of Suppuration and Maturation is promoted; also Marine Medicines, Coral, Mother of Pearl and Crabs-eyes do the same thing; to which notwithstanding we must always joyn Mirrh; for so we shall promote Suppuration, that the Small Pox shall fall off without pitting.

In the Malignant Small Pox and Measles, if there be Signs of Convulsions, Epilepsies, Phrensy, &c. if there be want of Sleep, grievous Pain, &c. then it will be advisable to give a Bezoardick powder made of Diaphoretick Antimony, *Terra Sigillata*, Harts-horn prepared without Fire, *Con-trayerva* Root; Bezoar-stone may be joyned with Cinna-bar of Antimony, adding a few Grains of *Magisterium Anodynum*.

We hasten to another design, namely, to take care of the Symptoms that happen at the time of the disease. Among these Vomiting has the first place, and is the Prologue of the Tragedy, which I think we should not stop in the Beginning, unless it be very troublesome, and then it may be stopt with Alexipharmacks and Aromatics, but especially by the Outward Application of our Balsamick Cataplasim of Chocolate, Oyl of Nutmeg, Balsam of Cinnamon, and Spanish Wine; or of Treacle mixt with *Pulvis Panmonicus ruber* and Nutmeg, and applied. So also dry Bags made of divers Aromatics will be proper.

Then there is another Enemy, namely Spitting, which always accompanies this disease. Therefore we must greatly endeavour, that the said Salivation may continue in its Vigor, and not stop before its time, which nevertheless may be stopt, on the thirteenth or fourteenth day, with Opiates, or other Paregoricks may be given once or oftener: For instance;

Take of Flowers of Panfies, Cow-slip each three Drachms, liquid
Laudanum Ten Grains. or
 more

more if there be occasion, which and other things may constantly be given in the Evening.

But before the thirteenth day Salivation must rather be promoted than stopt. And for this purpose it will be proper to give the Patient his Belly full of Small Beer to drink.

There uses to be also a swelling of the Face, which may be cured by the same Medicines; but these and other things may with more Benefit be given to Old People than to Children.

In the Confluent a Looseness troubles Children most, as Salivation does grown Persons, for Nature contrives to evacuate the Morbifick Matter by this way or that. In the Confluent one must not stop the Looseness too soon, as is usually done in the Distinct Small Pox.

In a Phrensy, which happens in the Distinct kind, Dr. Sydenham admits of Blood-letting, especially where the Face does not swell, and Pustules appear in great plenty. So he thinks likewise they should be taken up from their Beds, and exposed to the open Air: for so he has seen several cured of their Phrensy.

But if in the Confluent Small Pox the Spittle be so baked and viscid with the preceeding heat, that the Patient is well nigh choaked, as is usual on the eleventh day, a Gargarism may be used, which must be diligently syringed into the Throat: For instance;

Take of Water of black Cherries, Primrose, *Aqua Expulsiva* each three Ounces, *Oxyfaccharum* or

Oxymel of Squills one Ounce: Mix them. Or,

Take of Barley Water six Ounces, Honey of Roses one Ounce. Mix them.

So Bags are applied to the Crown of the Head, made of Amber, *Olibanum*, Seed of *Nigella*, Flowers of Roses, be sprinkled with Oyl of Amber; or a hanging Cataplasm made of leaven and Amber may be applied.

When Choaking is feared, *Sydenham* is for giving a Vomit of one Ounce and an half of Emetick Wine.

But if a grievous Acrimony, and an excessive Ebullition of Blood, cause Epileptick Fits about the coming of them out, *Spiritus cornu cervi succinatus*, and volatil Salt of Man's Skull will be good for Children; but Cinnabar of Antimony will be proper for strong People, and *Specificum Cephalicum D. Michaelis*, built upon its Basis, is good. Also this Cephalick Powder of *Ludovicus* will be proper;

Take of *Pulvis Bezoardicus* one Drachm, white Amber prepared half a Drachm, Native Cinnabar one Scruple, *Laudanum Opiatum* three Grains. Mix them.

This following also deserves commendation.

Take of native Cinnabar, Man's Skull, Elks hoof each half a Drachm, *Bezoardicum solare*, prepared Emerald each one Scruple, Saffron half a Scruple, Amber-Gryse two Grains. Mix

Mix them. Make a powder.

If there be Piffing of Blood, fince it proceeds from the Kidneys being affected, it is cured with Emulfions of the four Great Seeds, with Trochifces of *Alkekengi* and *de Carabe*, which muft never be ufed in the Beginning, but in the Declenfion.

A Coma, which depends upon the Obftruction of the Cortical part of the Brain, when that Vifcid Matter, which caufes Salivation, is Coagulated in the Brain, may be cured with De-obftruents, and here all Cephalick and Martial Aperients and other gentle Volatils will be proper.

For removing the Purple Spots, the Contemperation of the blood by the aforefaid remedies will be proper.

In a Suppreffion of Urine, which fometimes feizes young and brisk Men, arifing from a Confufion and great Diforder of Spirits, that ferve for its Excretion, through the Blood and Humors being difturbed with exceffive heat, Dr. *Sydenham* found nothing better than to take the Patient out of his Bed. Here it will be good to hold Water in ones Mouth: nor muft gentle Dieteticks be omitted, fuch as Tincture of *Alkekengi* made with Spirit of Salt, sweet Spirit of Nitre, *Tinctura Mæbii aperitiva*, mixt with Spirit of Amber; alfo sweet Spirit of Nitre, mixt with Spirit of *Sal Ammoniack* and impregnated with Oyl of Parfly and other things.

If the Patient complain of a Pain at his Heart and Reftleffnefs, by reafon of his taking cold, and if the Puftules fall, or if there be a Loofenefs in Children, then the abovesaid Cordial Potions made of *Diafcordium*, *Laudanum liquidum*, and deftilled Cordial Waters will be proper.

When the Patient is upon recovery, and the Puftules are falling, when he has tafted Flefh again for a few days, that is, about the one and twentieth, Dr. *Sydenham* advifes bleeding in the Arm, if the difeafe be violent; but if the Puftules be few, he rather omits it, and inftead thereof gives a Purge.

Swelling of the Feet and Legs is helped by Emollient and Difcutient Herbs; as leaves of Mallow, Mullein, Bay, Flowers of Elder, Melilot, Chamomil boyled in Milk.

In the coming out of the Small Pox fpecial care muft be taken of the Palat & Lungs, which becaufe of the abundance of Blood that paffes thither, & of their Membranaceous Subftance, are the moft obnoxious to this danger. For in them either an Exulceration is apt to follow, or the Motion is hindred, which is attended with Choaking.

If therefore the Puftules be already come out, and fallen off, and the Urine have loft its rednefs, we muft abftain from Diaphoreticks, and have refpect to the Depuration and Purification of the Blood, for which end things that we have often mentioned will be proper. But if there be figns of the Lungs being touched, and if the purulent Matter fink to the botom, befides an exact Diet, divers Antiphthifical Medicines muft be made ufe of. We have ufed the following deftilled Water with Succefs; in which we alfo gave a few drops of *Balfamus Sulphuris anifatus*.

Take of leaves of Betony, noble Liver-wort, Wall rue, Sanicle, leaves of Scabious, red Poppy, Daify, St. John's-Wort, Columbine each one handful, Roots of Colts-

Colts-foot, Fenil, *Scorzonera*, each one Ounce. Infuse them in water of Scabious, red Poppy, Bur net, Brooklime each one pound, Goats-milk two pounds. Add the Liver and Lungs of a Calf. Infuse them twelve hours, and then distil them according to Art.

Here also pectoral sulphurated, & myrrhated Aperients are proper.

Moreover, if from difficulty of Breathing and other Signs there be any suspicion, that the inner Parts are affected, we must beside the foresaid things help them with Traumaticks of *Terra Sigillata*, Diaphoretick Antimony, and Crabs-eyes. So likewise it happens, that in the State, Patients, either through the violence of the disease, or excessive Sweating, suffer a great decay of strength, in which case Corroboraters will be proper, and Tincture of Coral made with Spirit of a Stags Heart, and other gentle Cordials.

As for defending the Parts, the Eyes and Throat deserve consideration especially, lest they should be hurt with the Small Pox: for from the one Blindness may be feared, from the other Strangling. Many things are commended by Practitioners for defending the Eyes. This following is usual.

Take of Water of Roses, Plantain, Night-shade each one Ounce, Saffron one Scruple, Mucilage of Quince and Sumach-seed half an Ounce. Mix them, and anoint the Eyes therewith.

Rock Crystal also applied to the Ball of the Eye, is good against the Small Pox. Women's Milk, Goat's

Milk and Cream are good in this Case. So in the Inflammation of the Eyes *Saccharum Saturni*, with Water of Blew-bottle, &c. is good.

Oyl of white Lilies, sweet Almonds, and a little Oyl of Citron is good to preserve the Nose; or Rose Vinegar impregnated with Camphore may be given to smell to.

When the Hearing is hurt, Essence of *Cardus Benedictus*, Castor, &c. is good.

Divers things are commended for preserving the Neck and Throat, such as Gargles, Mucilage of Seed of Quinces, Line, Fennugreek, juice of Grey-fish, a Decoction of *Balaustia*, *Rob dianucum* and *Diamoron*. If a dry Cough afflict a Man, give him Syrup of Scabious, Liquorice, and Jujubs. You may also give him in his ordinary drink some Horse-dung, which by reason of its nitrous Salt is an useful Medicine. Or Sheep or Goats-dung may be given. This following is good for Burning and Sores in the Throat.

Take of a Decoction of Columbine in Wine and Water six Ounces, *Diamaron* one Ounce and an half. Mix and give it.

When the Small Pox or Measles strike in with great Anxiety; then beside the said Cordials, I highly value Saline volatils taken Inwardly. Above all I use to make choice of Essence of Myrrh, made with the vnious Spirit of Sal Ammoniack, which seldom failed me, or *Elixir proprietatis volatile*, the use of which I have found excellent in the striking in of an Itch, in the failure or undue-procedure of the *Menses* and *Lochia*. In this case Blisters will be

be proper, especially if a Suffocative Catarrh be feared, they may be applied to the Wrists and Feet, with Camphorated Treacle. In the meantime gentle Coolers and Expulsiues mult be given inwardly.

For general Preservation Medicines of Myrrh are good, *Elixir proprietatis*, *Tinctura salutis*, Essence of Myrrh, &c.

For drying up of the Small Pox besides Internals, Externals also are proper, such as *Pulvis Specificus*

Mynsichti, *Unguentum camphoratum de lithargyro*, or *Cosmeticum Clavii*.

For taking away Redness and Spots.

Take of Water of Frogs-spawn, Solomon's Seal, white Lilies, Bean-flowers each one Ounce, Fecula ari one Drachm, Camphore half a Drachm, *Cosmeticum Clavii* one Scruple. Mix them, and use it.

CHAP.

C H A P. VII.

Of Intermittent Fevers or Agues, and in particular of a Quotidian.

§. I.

WE have done with Malignant Fevers; now we will proceed to Intermittents. For Fevers are distinguished into Remittent and Intermittent. It is called a Remittent, when the Fever abates: and Intermittent, when it goes quite off, and at length comes again, and in every Fit of an Intermittent coldness preceeds, wherein it is distinguished from Continual ones. For that is an Intermitting Fever, or an Ague, as was said, which, as to its Fits, does not only remit, but intermit a while; so that all the time of the Intermission the Patient is wholly free from any Fever.

The chief differences of Agues are, 1. On account of Time; one is Quotidian, which we now treat of; another Tertian; another Quartan, which must be understood Inclusively not Exclusively. There are also Quintans and Sextans; and not long since I met with a Painter at the Court of *Hesse-Cassel*, who had an Octan. 2. On account of its disposition; one is called benign, another Malign. 3. On

account of the Humors; one is called Legitimate, another Spurious. 4. On account of Complication; some are called Simple, others Compound. The Simple are, when but one Ague holds a Man; Compound, if two or more joyned or combined among themselves, invade a Man the same day.

This therefore may be the Definition of a Quotidian Ague, namely, That it is a *Preternatural Effervescence of the whole Mass of Blood every day afflicting a Man at the same Hour, with heat, cold, and thirst, arising from a febrile Ferment, that is foreign, and disturbs the mixture of the Blood.*

I said *at the same Hour*, because several Physicians distinguish a Quotidian from a double Tertian, which tho it return every day, yet it seldom returns either at the same time, or in the same manner; but we allow not of this distinction. And a Quotidian, in regard of the manner of its Generation, may be called Primary or Secondary. That is Primary, which comes without a previous Tertian, or any other disease: And that Secondary, which follows a Tertian, or some other

other disease. One is Legitimate, which is produced by a febrile Matter of the same Nature; another Spurious, which is bred of a Matter of a different kind and temper; and this is more frequent than the other.

§. 2. Part affected, or the Subject.

THE Ancients held the Heart to be the principal Seat of Agues, as indeed of all Fevers, and the Fountain of heat; and the whole Mass of Blood, or rather the whole Body to be the less principal. But in what part this Febrile Ferment is bred, and how it is communicated to the Mass of Blood and to the Heart, has hitherto puzzled many ingenious Men. Some of the Ancients hold, That the Blood Putrefies in the Mesaraick Veins; but the Circulation of the Blood evinces this Opinion to be false. Others blame the Putrefaction of the Bile in the Liver, which Opinion is doubtful; because Bile, as Bile, never corrupts; besides, the Essence, or formal Reason of a Fever consists not in Putrefaction, but in the manner of Fermentation. *Fernelius*, who is very busy about the explication of Fevers, having refuted all other Opinions, places the proper Seat of all Fevers about the *Præcordia*, Stomach, Diaphragm, Hollow of the Liver, Spleen, *Pancreas*, Cawl, and Mesentery. And so, *Helmont* makes the Seat of Fevers to be in the first Ways from the *Pylorus*, along the *Duodenum*, and manifold Vessels there, the Guts and Veins of the Mesentery, to the Spleen and Liver. But these things are too

general, & the particular place is not designed: Therefore the excellent *de le Boë Sylvius* propounds another, and a newer Opinion about the Seat of Agues, well worth the consideration. He makes the *Pancreas* alone to be the Seat of all Agues, because of the Obstruction of the one or the other of its lateral Ducts; and he gives considerable Arguments for it, and proves, That the Fountain of Agues, and their mad Symptoms, cannot be better solved, than by the *Pancreas* alone. Now, tho I do not deny, that the *Pancreas* is the Seat of several Diseases; yet I have hitherto, and might very well question, whether it be the Place, Fountain and Seat of Agues, since it is from experience evident, That from all Parts, even the most remote from the Heart, something may, at some certain time, be communicated to the Blood, which is able to disturb its mixture, and produce an Ague. For I have seen a Tertian Ague caused by an Ulcer and *Fistula* in the Foot; while the *Fistula* ran there was no Ague, but as soon as it was healed up, an Ague came. Wherefore I am persuaded, that a Febrile Matter may lye in any solid part, and may at certain times be communicated to the Mass of Blood; which, as I said, upon an Ulcer tending to Suppuration, from an Obstruction in any part, may produce an Ague, inasmuch namely, as by such an Inflamed or Ulcerous part, some share of the Inflamed or Ulcerous Matter is communicated to the Blood, which passes to and again through all parts, and by disturbing its mixture, causes an Effervescence, which we call a Fever.

And

And we do not deny, but the cause of Agues may lye in the Vessels of the *Pancreas*, Stomach, Mesentery, and other remote Parts; also in the very Humors, Chyle, *Lympha*, &c. yet I reckon, that generally there is an Obstruction of one or more Vessels in the Stomach, and of the Chyliferous Ducts in a Quotidian Ague. And reason does evince as much: for in this Ague the Stomach is always observed to be weak and to swell. We may make a guess also from the *Juvantia* and *Ledentia*: for it is better cured by Stomachicks, than by any other Medicines; and it comes quickly after Eating.

The manner of an Agues coming, is generally from a particular stoppage of the Lacteal Veins and Chyliferous Duct; then the Matter in the first ways thickning, by means of Natures Propulsion being excited and proceeding to its accustomed work of Nutrition, and poured into the Heart, produces Tumults. Here two things are especially to blame. 1. The Alteration of the Nature and Substance of the Chyle, both of it self, and because of things mixt with it. 2. The Obstruction of the Chyliferous Veins; yet so as not quite to deny a passage. The Chyle therefore offends not so much in its first Qualities, as when it is over thick, clammy, tough, sharp, and acid, and lingers too long on the High-way to the Heart; and when it is communicated to it, and by consequent to the Blood, it Exagitates the Blood so long, till the excrements which it brings with it being attenuated, fly away by insensible Transpiration, and

that which cannot be conquered, is separated by proper ways. This Assertion is evident from the natural State: for after Meat we are often in our natural State taken with a slight Shivering, and sometimes we grow hot; what then must we do, if any thing Preternatural be carried thither? No wonder then, the more remote the Chyle is from the natural State, if the shaking and cold Fit be so much the fiercer. For Viscid, Glutinous Meats, Fish, &c. occasion Fevers, Crudities and Obstructions. This is apparent by the effects; for the Sick always complain at the coming of the Fit of a Pain and Tusion about their Backbone; because *Pecquet's* Chyliferous Duct runs along it, and Loathing and Vomiting show, that the fault is in the first Ways. Besides, Fasting alone often corrects the Excess, and removes the Ague, for with such the Chyle is, such is the Blood, and with such the Blood is, such is a Man's Health.

§. 3.

THIS Ague begins ordinarily with coldness and shaking, which lasts about an Hour, sometimes more, sometimes less; it afflicts one every day, and intermits a little; it comes quickly after Eating; when the cold is off, heat follows, differing according to the Constitution of the Body, sometimes violent and sharp, sometimes moderate and mild, sometimes longer, sometimes shorter, with loss of Appetite, Oppression about the Heart, Pain in the Head, Back and Loins, Thirst, Restlessness

ness, want of Sleep, Phrensy, frequent Pulse, Gaping and Yawning, and several other Symptoms usual in Agues. After it has lasted a while, it goes off ordinarily with a Sweat more or less. I found this Ague Mortal in a lying-in-Woman at *Hanover*. The Urine is not always white and thin, but remarkably tinged with red.

§. 4. Cause.

HAVING touched on these things, let us pass to the Cause of a Quotidian Ague. The Old *Galenists* affirm, that this Ague is bred of Phlegm putrefying in the first Ways; and therefore they say, That all things, which are able to gather Phlegm in the Body, may be causes of this Ague, such as a cold and moist Constitution of the Inwards, old Age, Child-hood, continual Cramming, a sedentary Life, Autumn or Winter time, all cold and moist Meats, long Sleep, &c. And they make the four Humors to be the cause of all Diseases.

The cause of the Fits in Agues is explained of the *Galenists*, by the nature of the Humor and its Seat. They place the Mine or *Focus* of this disease in the first Region of the Body, they make the Matter to be Bile, Phlegm and Melancholy, and as these Humors putrefy sooner or later, they hold, that the Ague Fits come once a day, or not so often. But the Circulation of the Blood refutes this Opinion.

Some fly to the Stars, others to Similitude of Seeds, and to an easy or difficult dissolution. But since these things have been suffi-

ciently refuted by others, I do not hold my self obliged to write *Liads* after *Homer*.

§. 5.

According to *Paracelsus*, a Mercury, dissolved with an impure Salt, is the Cause.

§. 6.

Helmont attributes the whole business to a corrupt Acidity, wandering beyond the bounds of the Stomach, and so irritating the *Archeus*. He says moreover, that the Fever is not only an expulsive endeavour, but part of the *Archeus* disordered through Indignation against the present hated Guest, who, according to him, is the occasional Cause.

§. 7.

According to *Whist*, the cause of this Ague is an acid and crude effervescent Blood, like Common Bakers Leven, which is able in an Hours time to transmute three parts or there about, of the Nutritious Juice into a certain effervescent Matter. Thus he ascribes the Cause to a peculiar Dyscrasy of Blood. He says, this Ague generally follows a Tertian, and he gives a reason; because, when the vital Spirit is most of it flown away by the frequent Dessagration of the Blood, and the Blood is thereby weakned, it does not so well concoct & mature the Nutritious Juice, but perverts it almost all into a fermentative Matter. And he says, there is great affinity between a Tertian and this;

III for

for a Tertian often turns to a Quotidian, and this into a Tertian. He adds, That this Ague, besides some fault in the Blood, has infirmities of the Bowels joyned with it; for the tainted Blood may easily fix its Recrements, which it has insensibly gathered, to the Bowels, while it passes through their windings. Hence in a Quotidian Ague he observed oppression of the Stomach, Tenseness of the *Hypochondria*, obstructions or swellings sometimes of the Liver, sometimes of the Spleen or Mesentery: but then they are not the cause, but only Morbid products.

Here also we may enquire, what, in our Author's opinion, may be the cause of the Intermision, and of Fits at set times in Agues? He says therefore after the first Moment, wherein the Nutritious Juice is not assimilated with the Blood (tho its Particles, mixt with the Blood, are as then circulated with it without any great Tumult or Perturbation; and so on, till the Mass of Blood is filled with them to a Turgescence) then immediately it bubbles up and begins to ferment. He compares it to new Bottled Ale, which if it be so close shut, that nothing can evaporate, at first it is kept in the Bottles, without fermentation or violence; but afterwards the Mass of Liquor grows turgid with the *Effluvia*, that are still kept in, ferments notably, and through the violence of the Fermentation often breaks the Bottles. He says also, that this happens at a set time, and at so many Hours distance, as in an Ague the Liquor rises to an height of Turgescence.

He gives the reasons and causes

of the Intermision, and set coming of the Fits. Intermision follows; because, according to him, all the Morbifick Matter is spent at one Fit; and so, till a new one be supplied, an Apyrexia must of necessity follow. And the reason, why the Fits come at set distances of time, according to him, is, because at set Hours the Nutritious Juice meets with the Blood in the Vessels, which growing to a Plenitude and Turgescence, causes a Fit on that day, and when that is ended, at the same distance of time sufficient Matter is gathered for the Fit following. Hence, if Patients be abstemious, the Intermision is the longer protracted.

And as for the cold Fit, which comes before the hot in Agues, he says, it arises, when the Particles of the Nutritious Juice encline from a State of Crudity towards Maturity, and attain it not, but contract a remarkable Acidity, whereby they prick and vellicate the Nervous Parts; and so cause a Sense of cold.

In a Quotidian Ague, according to our Author, the whole supply of Nutritious Juice is perverted into a Febrile Matter, by reason, that is, of a great taint in the Blood; hence in that space of time, wherein Concoction ought plenarily to be finished, which is usually in four and twenty Hours, this Matter rises in Turgescence, and causes a Fit every day. Therefore Patients are very weak after a Quotidian: for in every Fit, as much of the Nutritious Juice as turns to the Food of the disease, so much strength does the Body lose.

§. 8.

Sylvius reckons the cause of Agues, to be an Obstruction made in one or more of the lateral pancreatick Ducts, by too much Phlegm carried thither and detained there, which usually happens, when Phlegm is driven with the rest of the Blood into the *Pancreas* by Circulation, and with the Pancreatick Juice gets into the Glands of the *Pancreas* and its lateral Ducts, in which either through some fault in the Part it self, or external cold, it thickens and coagulates, in such a manner, that it obstructs one or more of the lateral Ducts. The *Sylvians* ascribe the Fits of Agues to the Stagnation of the Pancreatick Juice in one or more of the lateral Ducts through Obstruction, which endeavours to make its way, sometimes sooner, sometimes later, through the obstructing Phlegm, encreased in its Acrimony, and not only produces a vitious Effervescence in the *Intestinum tenue*, but is dispersed every day, especially to the Heart, and causes a preternatural frequent Pulse. And they endeavour to prove, that a Coagulation of the Pancreatick Juice may happen, by several Experiments made both in Men and Beasts.

They hold, That the cause of the Intermision and Fit is in this manner following. The Pancreatick Juice by Stagnation is made sharp, and so by penetrating the obstructing Phlegm, it makes its way through it to the common Duct, till, when all the Juice is poured out, that which was formerly retained, the foresaid Phlegm still clinging to the sides of the Ducts,

by degrees closes up, whereupon the Pancreatick Juice is gathered again for another Fit, which by continuance is again made sharp, pierces the Phlegm again, and raises a new Fit, and the Fits return at the same distance of time, as often as there occurs obstructing Phlegm of the same Quantity and Viscidity, with a Pancreatick Juice of the same Acidity and Acrimony.

And the reason why the Fits return, sometimes every day, sometimes every third day, and sometimes on the fourth day, they hold to be, partly the difference of the Stagnating, Pancreatick Juice, and partly the difference of the obstructing Phlegm.

The cause of the inequality of the Fits in Agues, according to them, is, inasmuch as the obstructing Phlegm is more or less viscid, or all the Pancreatick Juice more or less sharp, and that through the different use of the six Non-natural things. And hence they give a reason, why Quotidian Agues turn to Tertians, and Tertians to Quartans, &c.

And they say, the cold Fit in Agues has its rise from an acid Pancreatick Juice; and the hot, chiefly from too hot a Bile. And the reason, why the Fit of an Ague generally begins with cold, and ends with heat, is; because the Pancreatick Juice being made over sharp by tarrying in one or more of the lateral Ducts, after it is run into the *Intestinum tenue*, does there with the Bile produce such an Effervescence, wherein the Pancreatick Juice, being predominant in its Acidity, sends sharp Vapors every way, which are troublesome with a Sense of cold; these,

when they come to the Gall Bladder, by their Acrimony sollicit it to contract it self; whereupon the Bile, gushing out in a larger quantity than usual into the *Intestinum tenue*, drowns the Pancreatick Juice, and so produces such a vitious Effervescence with it, wherein the Bile bearing Sway, causes heat.

Thus *Sylvius* himself deduces the cause of a Quotidian Ague from the Obstruction of one or more of the Lateral Pancreatick Ducts, which occasions a vitious Effervescence of the Bile and Pancreatick Juice in the *Intestinum duodenum*. And, to descend to particulars, in a Quotidian Ague, according to him, the obstructing Phlegm is less in quantity, and not so glutinous, that is, one that returns once in four and twenty Hours.

§. 9.

O THER Mens Opinions, about the Causes of Agues being thus premised, we will now give Our own. An Ague therefore, in our Opinion, rises, when there is an obstruction in any part of our Body, so that the *Serum* or any other Humor lies still behind it, which when it ripens, and ferments, distends the adjacent Parts, and so presses upon the Obstruction, that it flies open, and so the Humor, which had so long stagnated, is carried by the Lymphatick Vessels to the Blood, and by disturbing its Mixture, causes a Fever there. This Obstruction is usually in the Chyliferous Ducts, in which the Chyle often stagnates, and by tarrying is made over acid

and viscid. Hence the Febrile Matter is not always poured into the Blood; but as in Catarrhal De-fluxions a Fluxion is raised, when so much Excrement is gathered, that Nature can bear no more; so in Agues the Fit returns, when the turgelcent Matter sollicitates its Diffusion again. In a Quotidian therefore the peccant Matter sticks in the solid Tubes of the Stomach, and there is a viscid Chyle in the Guts, because the Lacteal Veins are obstructed: for there is always an oppression of the *Præcordia* in this Ague, which shows, that the Stomach and Guts are overcharged with Phlegm, or that Phlegm sticks among the Membranes: For there may be several causes of one effect.

As to the return of the Fits, it is usually in the Manner following. There are Valves in all Parts of our Body, especially in the Back, because many Nerves are there, and there are more in a Nervous Part, than in a Carnous. Now, when upon any occasional cause, an Humor separated from the Blood, is carried to any solid Part, so that it breeds an obstruction in the foremost Part, it will stick there; for it cannot go further forwards, because of the Obstruction; and backwards it cannot return because of the Valves. This Humor at length, being by Stagnation made sharp, does then begin to ferment, and to take up more room (as one may observe in a batch of leavened Bread) so that at length it breaks Prison, is communicated to the Mass of Blood, raises the like Fermentation there, and so causes the Fit of an Ague. This peccant Humor cannot all be expelled,

pelled, but some reliques will remain in the part, and then presently as another Humor is moved to that part, it begins to ferment with these reliques, and then breaking Prison again, it causes a new Fit. According to the different Constitution of this Humor different Agues arise. Thus, if the Humor be viscid, it finishes its Fermentation, and is carried to the Blood once in four or six and twenty Hours, wherefore it is called a Quotidian Ague. These things also may be understood of a vitious Chyle, if it be too Acid by stagnating, because of the obstruction of the Chyliferous Vessels, and so communicated to the Blood, hereupon a Fit is raised, which ceases so long, till another vitious Chyle is bred.

We can mechanical'y demonstrate the cause of the Blood's growing hot by wet Hay, an equal quantity whereof being put into several Receptacles, allowing the same Circumstances to them all, they will begin to grow hot at the self same Hour, concerning which see that diligent searcher of Nature *des Cartes princip. Philos. part.*

4. S. 92. For in the very same manner, whenever some Particles, that are thin and apt for Motion, produce an obstruction in a Tube, be the cause what it will, it cannot otherwise be, but that upon the approach of other Particles, bringing another ethereal Matter, these Particles must undergo another change, till they attain Corruption, or rather Maturity, and so being fitted for Motion, joyn themselves to the Humors, as they pass by, and coming to the Heart, produce a disturbance as well in the Motion as Mixture of the Blood.

And seeing some Fewel, swimming upon some certain subtil Matter, always remains, if by the Pores, opened to that very end, a new Matter arrive there, by the Agitation of the Particles among themselves, it will be altered again, and will ripen in an equal time, and so cause a new Fit. I hold therefore, that a Febrile Matter is not bred in the Mass of Blood it self, nor preexists in it, but is communicated from some place else at some certain time, by the Tube of a part, whatever the part is, and produces such an Effervescence, by reason of the inequality of Particles entring the Heart, and peccant in Motion and Mixture, lasting so long, till the salvage Ferment is discharged by Sweat, or some other way. And these things must be understood of Agues, which have their rise either from the Air, or Internal Inflammations, or Ulcers, &c. But ordinarily, as we said before, these Agues arise from obstruction of the Chyliferous Ducts, and Stagnation of the Chyle; the more plentiful therefore, thick and acid this is, the longer the ague Fit will be. The Chyle in a Tertian is too sharp, in a Quartan too acid, and in a Quotidian too viscid; but the Sharpness and Crudity is less. Nor can it be denied, that Nature her self, when she has gone these rounds several times, does, as it were, accustom her self at the usual times to get rid of the Matter, if there be but the least remaining; as they that use themselves to Let Blood, or Cup, if they omit doing it, feel Signs of it.

As to the shaking, or cold, which Patients feel in the Beginning of

the Fit, it is produced generally by the disposition of the Humor or Chyle, according as it is more or less sharp, or acid, or viscid, and so comes not manageable to the Blood. For these Particles by sticking to the Membranes and Fibres, and vellicating them with their Acrimony, cause shaking. And because a Man never observed shaking to proceed from any thing but Cold, he thinks that this also proceeds from Cold, which notwithstanding is not always true; because such as lye with them, complain of a troublesome heat and burning in them: It is evident also from this, that always while the cold Fit lasts, they are troubled with extream Thirst, which cannot be in any other coldness. Afterwards they feel heat, that is, when the Humor is much moved, and grown sharp.

But if the peccant Matter, carried to the Blood, can be cut and attenuated, so as that it can fly away by insensible Transpiration, then the Fit is at an end, and the Fever conquered; which Sweats, when they flow abundantly in the declension of the heat, it is a good Sign; for when the Febrile Matter is so cast out, the Blood returns to its sedate Motion, and the whole Animal Oeconomy is perfectly restored.

The excellent *Hoffmannus*, as well as I, holds, That there is something convulsive in the shaking Fit: for the Nervous and Membranaceous Fibres are vellicated.

The Fits sometimes anticipate, sometimes postpone, as well on the score of Nature's being strong or weak, as of the Humor or Chyle.

§. 10. Prognostick.

NOW that we have viewed the cause, we will proceed to the Prognostick. The Issue of a Quotidian Ague is not very hazardous, but of long continuance, slow and pertinacious; so that sometimes it lasts six, seven Weeks, or longer, before it goes quite off, yea, I have known one last above half a year. It is possible also for it to be mortal, as I observed before in a lying-in-Woman at *Hanover*. It sometimes ends in a Consumption; often in a Dropsy; sometimes in a Coma or Lethargy. There is also a general Prognostick for Agues in 4. *Aph.* 43. of *Hippocrates*. Fevers, in what manner soever they intermit, signify no danger. Nor are Agues dangerous, if so be they are rightly treated.

§. 11. Dietetick Cure.

THE Diet must be thin and inciding.

The Air must be hot and dry, either by Nature or Art.

The Meat must be easie of digestion, because of the weakness of the Stomach; Spoon-meat and Barley-broths are proper, and Birds, and Pullets, roasted rather than boyled.

The Drink must be small, yet Wine sometimes mixt with Spaw-waters may be allowed, the Belly must be loose, and the Passions of the Mind moderate.

§. 12. The

§. 12.

THE Dietetick Cure being thus briefly made known, the next thing is the Pharmaceutick Cure. And first let us see what Indications the *Galenists* propose to themselves in the Cure of this Ague. They order first, That the Humors be prepared, and the Obstructions caused by Phlegm opened, to which end they commend all things, which have an attenuating and an inciding virtue. They inculcate, That in a Quotidian Ague care must be taken of the Stomach, and therefore they order, that the Patient be refreshed with strengthening things, both inwardly and outwardly. They extol a Cataplasim of Mint and Wormwood, and other Aromaticks. When the Matter is prepared, they often Purge. *Zacutus Lusitanus* prescribes two remedies, where-with he boasts how he has cured the most contumacious phlegmatic Agues. One of them is the following Decoction of Chamomil;

Take of Flowers of Chamomil three Pugils, Sea Wormwood leaves two Pugils. Boyl them in three pints of Water, to the consumption of half. Add to the Colature of white Sugar four Ounces. Let the Patient take five or six Ounces every day in the Morning.

The other is a Decoction of *China* and *Guajacum*, given for five and twenty days.

§. 13.

THE *Paracelsists* & *Helmontellans* will cure all Agues, especially a Quotidian, with their *Arcana*, in four days, without Blood-letting. They allow Wine, and maintain, that they can cure all Fevers with a sweating Medicine, that is, *Mercurius Diaphoreticus*, which incides, attenuates, dissolves, and waists the occasional cause, wherever it is, and this without Sweat.

Their other Medicines are Salts of Cephalicks, Majoran, Rosemary, and other things, which must be Alkalies, and given on a fasting Stomach before the Fit. They undervalue all Galenical Remedies, such as Bleeding, Purg-ing, Blisters, Clysters, &c. as insignificant things. Concerning these things see *Grembs* his *Arbor Ruinosa*.

§. 14.

Wills will have a Quotidian Ague cured like a Tertian. Only in a Quotidian more regard must be had to the Stomach, that is, the Humors lodged in the Stomach must be discharged; the Obstruction of the *Viscera* must be opened, the weakness strengthened, and withal, we must do what we can, that the Dyscrasy of the Blood may be corrected, and the Ague Fits stopt. Therefore for robust People, and such as have not lost their strength, he commends Vomits above all things; nor does he exclude repeated Purges, that the daily product of Excrementitious Matter may be carried off. Beside these things,

things, he highly extols digestive Remedies; and De-obstruents, which restore the Ferments of the *Viscera* and Blood, and correct their Dyscrasies, must be often given. For which end he praises Salts of Herbs and their Extracts, Mineral acid Spirits, and sometimes Chalybeates. When the Stomach is very moist, he orders the following Mixture to be given.

Take of *Aqua magistralis lumbricorum* two Ounces, *Elixir Proprietatis* six drops. Mix and give it.

And he advises the applying the Fomentation following to the Stomach.

Take of leaves of Sea Wormwood, Lesser Centaury, Southernwood each two handfuls, Gentian-root one Ounce. Cut them and boyl them in as much White-wine, as will suffice for a Fomentation.

After this Fomentation, he orders some toasted Bread to be Dipt in the Liquor and applied.

Besides, he will have divers Febrifuge Plasters applied to the Wrists.

§. 15.

Splivus in the cure of Quotidian has the following intentions. First, That the obstrueting Phlegm, which is more or less glutinous and coagulated, may be incided and dissolved, and if possible, carried off. Secondly, That the Acidity and Acrimony of the Pancreatick Juice may be allayed Thirdly, That the vitious Effervescence of it and the Bile in the Small Guts may be hindered, and amended.

For inciding the obstrueting Phlegm, he commends Aromaticks, and all volatil Salts; but so used, that the whole Body may be hot at once, either with Motion, or a Bath, or Cloths. He cries up the following Mixture, as good for a Quotidian in Melancholick and Phlegmatick People.

Take of Water of Parsly two Ounces, Fenil one Ounce, *Aqua theriacalis simplex* or *Vitæ Matthioli* one Ounce and an half, volatil Salt of Amber one Scruple, Syrup of *Carduus Benedictus* one Ounce Mix and give it.

But in a Bilious Constitution, and therefore in a Tertian, he commends this as useful.

Take of Water of Fumitory three Ounces, Sal Ammoniack or Tartar vitriolated one Drachm, *Antimonium Diaphoreticum* half a Drachm, Syrup of Fenil one Ounce. Mix and give it.

In Phlegmatick and Bilious Natures he commends this following.

Take of Water of *Carduus Benedictus*, Cichory each one Ounce and an half, *Aqua theriacalis simplex*, destilled Vinegar, each six Drachms, Crabs-eyes powdered half a Drachm, Syrup of the five opening roots one Ounce. Mix, and give it by Spoonfuls.

For the redounding Humors, which cause obstructions, he advises Vomits. To which end he has given with great success a Vomitory *Sapa* made of Antimony. He holds also, that the Humors should be purged off by Stool.

For correcting the preternatural Acidity

Acidity and Acrimony, he has with great success used volatil Salts and Aromatics, not neglecting Opiates.

In excessive Cold, an usual Symptom of Agues, he advises to put a few drops of Oyl of Cloves in some Antifebrile mixture. For allaying the heat, he prescribes divers Juleps and Apozems; of which in their place.

§. 16.

OUR Cure also is grounded on Indications; which are, That the Febrile ferment may be removed, not only out of the Mass of Blood, but out of its Tubes, especially of the Stomach, together with its morbid product; that the Viscidity, or Acidity, or Acrimony of the Chyle may be corrected, and the Obstruction removed; then the Effervescence of the Blood must be stopt, the most Urgent Symptoms obviated, and strength restored.

The Febrile ferment in Agues, especially in a Quotidian, cannot better be carried off, than by Vomits and Purges, which if they be given before the Fit, and on the first days, are excellent Remedies. If the disease be radicated, and the Stomach stuffed up, we judge, a Vomit should be forborn, and a gentle Purge rather given. For the Stomach is mightily weakened by taking of Vomits. Vomits, as we said, are good in the Beginning (unless one be Consumptive) especially where there is a Nauseousness, Vomiting, Oppression at the heart. Among Vomits we commend such as are made of Antimony: but they must be given only to strong Peo-

ple, because we must always have regard to the Tone of the Stomach. It is better therefore at the coming of the Fit to give Specificks against an Ague, and often to mix Purgatives with them; that so the first ways may be cleared of the Excrements. Then these Agues are easily cured by correcting, which is done three ways, chiefly by Dilution, Precipitation and Incision; though the first be proper to Sharpness, the second to Sourness, and the third to Viscidity. The Diluters are a Decoction of Barley, Whey of Goat's Milk, &c. Precipitants are of use in these Agues, but they must be fixt and Absorbent, such as Crabs-eyes, and Diaphoretick Antimony. But upon my own Experience, I prefer Irish Slate above all others in Agues: for the Febrile Effervescence is best stopt by this Precipitator alone. And this Method will be the safer, when the Fever is over, if the precipitated Matter be carried off by some proper gentle Purge: For it does not much disturb the Blood, but reduces it to its pristine temper and consistence. Gentle Catharticks are either infusions of leaves of *Senna*, *Carthamus*, and *Agarick*, adding always Febrifuge and bitter things. Incisers are hot and volatil, such as *Carduus Benedictus*, Pepper, Mustard, Wine, Oyl, Cloves, Camphore, Treacle, Salts and volatil Spirits. For all bitter things are proper in this case, because they strengthen the Stomach, and drive away every Eneimy (for I have seen this Ague removed only by compound Essence of Worm-wood) whether they be given in form of a Decoction, or Physick Wine, or Tincture, or *Elixir*, as the lesser Centaury,

Centaury, Wormwood, Southernwood, *Carduus Benedictus*, root of Gentian, Elecampane, &c. And medicated Wines may be made of these, adding some Purgatives, especially leaves of *Senna*, which often do the whole business. And so do all Aloeticks, as *Elixir proprietatis volatile absque acido paratum*, *Tinctura salutaris*, &c. Clysters also may now and then be given to tender Persons, as there shall be occasion, which are made of lesser Centaury, Wormwood, and other things. And Sudorificks, which are here to be used, ought to consist of Salts and Minerals. An Antifebrile, through the Patient's negligence, not taken before, but in the Fit, sometimes makes the Fit twice as strong, as otherwise it would have been; but then he misses the next Fit, and the reason seems to be, because by this means the Matter of the whole mischief was washed off, and all carried out of its lurking hole into the Blood, which made that Fit so much the more violent. At length in the End, and in the Declension of the Fit, we often use (Nature shewing us the way) to give Sudorificks, that the Febrile Ferment may the more commodiously be expelled by large Sweating, in which case they commend *Bezoarticum Minerale*, all fixt Antimonials, Salt of Sal Ammoniack, Harts-horn, *Scordium*, lesser Centaury, *Carduus Benedictus*, Wormwood, *Mixtura Simplex*, Treacle Water, and several other things. Out of the Class of Precipitants, we refer hither Coral, Pearl, Ivory, Egg-shells, Alum, Vitriol, Nitre, Jesuits powder as a Specifick, root of Tormentil, Yarrow, *Specificum Antifebrile Crot-*

lii, Riverii, Mynsichti, Kergeri. *Arcanum Duplicatum* is excellent good, which is also de-obstruent. For the sake of Juniors take these Receipts.

Take of *Arcanum Duplicatum* one Scruple, prepared Crabs-eyes half a Scruple. Mix them. Make a Powder. Or,

Take of Ivory prepared without Fire one Scruple, *Antimonium Diaphoreticum* half a Scruple, Myrrh six Grains. Mix them. Make a Powder. Give it thrice before the Fit. Or,

Take of true Jesuits Bark one Drachm, Salt of Tartar half a Scruple. Mix, and give it with Wine, before the Fit.

Radix Cava is also commended, if it be taken, from half a Drachm to a Drachm. *Tachenius* commends Crabs eyes dissolved in Spirit of Salt of Tartar, and given before the Fit. Or,

Take of *Pulvis Bezoarticus*, Cinabar of Antimony each twelve Grains, volatil Salt of Harts-horn, white Amber each two Grains. Mix them. Make a Powder.

And so Liquids are not without their deserts, such as Spirit of Salt, Nitre dulcified, Essence of *Carduus Benedictus*, Wormwood, lesser Centaury, &c. which ought to be given two or three hours before the Fit in some proper Vehicle; for the whole stress of the business lies in the giving, that the Medicine may arrive at the Stomach, and Heart, or Tube, at the very Moment, when the febrile Matter

ter begins to stir in the Blood, and before the Chyle be poured into the Blood. Here are Prescriptions.

Take of Essence of Wormwood, *Elixir Febrile Mynsichti* each one Drachm. Mix them, and give forty drops before the Fit.
Or,

Take of *Aqua Febrifuga*, Water of *Carduus Benedictus*, each one Ounce and an half, Spirit of Nitre dulcified, *Laudanum Opiatum* one Grain and an half, Oyl of Cloves two drops (especially where cold is violent) Syrup of Orange Pill six Drachms. Mix, and give it by Spoonfulls before the Fit.

And if the Stomach and Belly swell very much, give the following Pills.

Take of extract of Gentian, Birthwort, Elecampane, Lignaloës, *Carduus Benedictus*, lesser Centaury each half a Scruple, Salt of Wormwood, Ammoniack each one Scruple, *Crocus Martis aperitivus* half a Drachm, distilled Oyl of Oranges, Fenil each three drops. With *Elixir Proprietatis* make Pills, fifteen or twenty for a Dose.
Or,

Take of the remainder of Spirit of Sal Ammoniack half a Scruple, Vitriol of *Mars* thirteen Grains, Jesuit's powder one Drachm. Mix them. Make a Powder for three Doses. Or,

Take of Salt of Wormwood, lesser Centaury, *Carduus Benedictus* each one Scruple, Ta-

marisk half a Drachm. Mix them in a Stone Mortar, with as much Spirit of Salt as they will imbibe. I should add of Tartar two Drachms. Give half a Drachm, or two Scruples for a Dose.

They must not be too free in cooling Juleps; for hereby their Stomach and Belly swells. Let them therefore drink small Beer, adding a little Wine, or a few drops of Spirit of Nitre dulcified. Spirit of Tartar, freed from its Water, is able to do wonders in this sort of Agues, and it may be cured with this Spirit alone. Opiates also must not be neglected here, especially *Theiaca Caelestis*. I use to mix Jesuits Powder with Purgatives, or, if there be occasion, with Sudorificks, and give them towards the latter end of the Fit. I know how to make an antifebrile martial Medicine, which will never fail you in any Ague. For in opening the Tubes, and sweetning the acid Matter, martial Medicines do the business. Fixt Salts are best prepared with Vinegar. Oftentimes in this case *Mercurius dulcis*, mixt with other Specificks, is the only relief, camphorated Medicines, and Decoctions of the Woods are highly valued. Diaphoretick Powder made of Antimony will help; in defect whereof *Specificum Stomachicum Poterii* will be proper. When the Head is heavy, and the Stomach loaded with Phlegm, *Saccharum Saturni*, or *Lapis Prunelle* may be given, which by qualifying the heat create a Stomach. And here our advice is to abstain from Blood-letting, unless there be a great *Pletthora*. For the Essence of an Ague consists not in a hot Intemperature, that it should require

require taking away of Blood, because the heat is only an Effect; but the Matter lies in the Tubes and Chyliferous Ducts,

Among Externals we reckon this following Febrifuge Plaster of ours.

Take of *Galbanum*, Sal Gemm, powder of Tormentil, Shining Soot of the Chimney, leaves of Shepherds-Purse each two Drachms, Camphore one Drachm and an half, with a sufficient quantity of Turpentine, *Matthioli* his Oyl of Scorpions, Venice Treacle each one Drachm and an half. Make Plasters for the Wrists.

Febrifugum Strobelbergeri and *Mynsichti* will do good.

Styptick and Astringent Herbs may be bruised, and applied with Vinegar to the Pulsēs; to which Empiricks use to tie Paper or Flax. Camphore also may be hung about the Neck. And divers things may be outwardly applied to a weak and swollen Stomach. The following Bag will be proper;

Take of Barley sprouting two handfuls, Chamomil Flowers one handful, Seed of Cummin bruised one Ounce and an half, Coriander two Drachms, common Salt one handful. Mix them and make a Bag.

Which may be sprinkled on the outside with some distilled Carminative Oyl. Spirit of Wine or Balsam of Peru may be applied to the Back-bone, or to the Wrists and Temples; so may Silver-weed, Cobwebs, &c.

Or divers Carminative Oyls, Spirituous Waters, of Mint, Treacle, Camphore, &c. In this case also *Willis* his Botion of two Drachms of *Aqua magistralis lumbricorum*, and a few drops of *Elixir Proprietatis* will be proper.

As to the Cure of Symptoms of Agues, it may be found in the end of this Book.

Strength must be recruited with convenient Cordials and Restoratives, of which I shall treat in another place.

CHAP.

C H A P. VIII.

Of a Tertian Ague.

§. I.

AMONG Agues a Tertian is the most common, which often resembles Continual Fevers, and according as it is attended with innumerable sorts of Torments, so it is sometimes more, sometimes less violent. This Ague is called a Tertian, not because it comes at the distance of three days; but inclusively from the Day wherein one Fit comes, and the third after when it returns, that is, once in forty eight Hours. It may be described to be a preternatural Effervescence of the whole Mass of Blood, afflicting the Patient every other day with the Head-ach, Thirst, Cold, and Heat afterwards, &c. caused by a Febrile Ferment, coming from the Tubes, especially of the Liver and the Chyliferous Ducts, which disturbs the mixture of the Blood.

This Ague is twofold, Legitimate, and Spurious. That is called Legitimate, which of it self ends at the fifth, or sixth, or at most the seventh Fit, with some Critical Evacuation, but generally by a Translocation of some ferous and sharp Humor, which they call Bilious, into the Face, Lips, Legs, Ears, and sometimes the Tongue, Palate and elsewhere. That is called Spu-

rious, which lasts longer before it be quite over. I knew a Woman at Hanover, who had it seven whole Weeks; and it decreases so slowly, that it cannot suddenly be removed.

Upon account of Complication, one is called Simple, another Compound. That is Simple in which but one kind of Fit comes; that Compound in which there are several. Sometimes a Tertian is Epidemick, which neither spares Age, Sex, nor Constitution; but takes Choleric Persons most; as I have often observed. This Ague is frequently joyned with the Scurvy, & is therefore called a Scorbutick tertian, which the famous *Etmuller* observed to come without any hot Fit.

§. 2. *Part affected.*

IT is well known with what fierceness Authors contend about the Subject of a Tertian Ague. Some say the Blood putrefies in the Mesaraick Veins, others accuse Putrefaction of Bile in the Liver, others about the *Præcordia*; some place the Seat of this Ague about the Stomach, several about the Cavity of the Liver, and many will have it about the *Pancreas* Cawl, and Mesentery. And We hold, That the cause of Agues may reside in any solid Part whatever, even in the Fingers,

Fingers, and so may be communicated at Intervals to the Blood, but especially in the Chyliferous Ducts: And tho I do not deny but a Febrile Ferment may lurk in the Tubes of the *Pancreas*, Mesentery and other Parts; yet generally it comes from the Obstruction of a Tube or two in the Liver, and especially from the Obstruction of the Chyliferous Ducts, as the Ancients hold, and reason evinces. For the Jaundice is apt to come upon a Tertian Ague; and there is often a pain in the right *Hypochondrium*, with a dry Cough. All which things happen upon the obstruction of the Tubes, whereupon the Bile not being separated, is apt to breed the Jaundice; or being carried to the Guts, to produce the Colick, Looseness, and other Ails.

§. 3. *Diagnostick.*

AS to the Diagnostick Signs, this disease is obvious to the Eyes, and needs no curious Search. It begins ordinarily with a coldness and shivering, which last about an Hour, sometimes less, sometimes more; when this is gone, heat follows more or less according to the Constitution of the Body, with Restlessness, Loathing, and Vomiting of bitter stuff, by reason of the ascent of bilious and sharp Humors, which vellicate the Nervous Orifice of the Stomach, a Spasmodick Vellication of the Gall-bladder preceeding: For Patients Vomit up the regurgitating Bile and other ill Juices, with violent straining, and in great quantity. And this vellication proceeds from a disorder of the Animal Spirits, which

being disturbed may easily cause Convulsive Motions.

Bitterness in the Mouth attends this Ague, from bitter Particles conveyed thither out of the *Serum* by the Glands, or rising out of the Stomach from Bile, like a Vapor, to the Jaws, and then to the Tongue; which bitter Particles do so infect the Meat and Drink, that the English Persons, not dreaming of such an Humor's being communicated to the Tongue, complain that their Meat is bitter. For the Tongue is of a spongy and porous Nature, so that it is able to quench Lacca, Wax, Pitch and other things set on Fire, without any harm. In this Ague you shall always meet with a pain in the Head and Loyns: The reason is, because in such a heat the Pores of the Arteries are very much dilated, so that the acid, cutting and pungent Parts being squeezed out of them, are lodged sometimes in the Loyns, sometimes in the Head, and produce by their violent Motion a Solution of Continuity, and Pain depending thereon.

A Phrensy is often troublesome in this case, which arises, because the Animal Spirits ramble beyond their Bounds, fortuitously, this way and that, without any determination in the Brain; and by their proper Motion are carried to open some of its Pores, in the same manner, as they used to be opened formerly at the presence of Objects.

By reason of these disordered Spirits, Patients are troubled with continual Watchings. And an unquenchable Thirst, as an ordinary Symptom of this Ague, arises from Saline and bitter Corpuscles

pulses carried to the Jaws.

The Urine is red and turbid, because of the Salt and Sulphur, which are separated by the violent Motion of the Blood and other Humors in the Reins, and these being mixt with some Terrene Particles, render the Urine very high coloured.

About six, seven, or eight Hours after, Sweat follows, when the heat is over, and the Pores are open again, so that the sharp and hot Humors, not duly, but only confusedly mixt with the Blood, may be forced through them, with the *Serum*; and if the Chyle be reduced, all is at quiet, till new Matter appears, and then the Fit returns.

§. 4. Cause.

HAVING viewed the Symptoms, we must proceed to the *Ætiology*. First of all, the *Patentists* accuse Bilious Humors gathered in the Liver; but especially in the Gall-bladder. Therefore in a Tertian they blame a hot and dry Intemperature, Youth, hot Constitution of Air, Care, Fasting, too hot a Diet, and excessive Motion. They say also, that such as have an hot Liver, and who by Surfeiting, and a bad Diet have contracted many Crudities, upon the Mixture of the Crude Humors with the Bile, are subject to Tertian Agues.

§. 5.

According to *Paracelsus* the cause is a Fetid Sulphur, with a dissolved Mercury, and an impure Salt, gathered in the region of the Liver.

§. 6.

Hellmont attributes Agues to a corrupt Acidity, wandering beyond the bounds of the Stomach, which irritates the *Archæus*.

§. 7.

According to *Willis* the cause of a Tertian Ague is, a certain Nitro-Sulphureous Matter, wherewith the Mass of Blood is sated to a Turgescency, just as new Bottled-Ale works. If this Nitro-Sulphureous Matter, which has much Acrimony in it, be diffused all over the Body, it vellicates the Nervous Parts, and deadens the heat and Vital Spirits, whereupon Chills and Shivering, Vomiting, &c. ensue; then, as the Vital Spirits and Innate Heat prevail again, this Effervescent Matter in the Blood is subdued; and then by means of Respiration a violent heat is diffused all over the Body, which must of necessity be attended with Sweat and other Symptoms.

§. 8.

Splivius blames the Pancreatick juice, grown sharp, by the passages being a while obstructed, and a vitious Effervescence arising thence afterwards, because furthermore an Acid, together with a predominant lixivious Salt, being carried by the lacteal Veins, and the thoracick Duct, to the Subclavian Veins, and at length to the Heart, causes heat and a frequent Pulse.

§. 9. We

§. 9.

VV^e are of Opinion, That in a Tertian Ague Ferments may lye any where, which being communicated to the Blood, are apt to ferment; for these Particles stagnating in the Tubes, are insensibly more and more altered, and then, when one of them acts upon another by their mutual Impulse, there must needs be a struggle, which being raised, the Matter is carried into the Mass of Blood; and because these Particles are thin and sulphureous, and therefore more inflammable in a Tertian, the Fits usually come at set times. But oftentimes Bile, which is nothing else, but a sharp and sulphureous Excrement of the Chyle and the Chylifick Parts, grown sharp in a certain degree of Corruption, but caused chiefly by External Errors. If this be not voided, but gather, and stagnate preternaturally, first of all it ferments (that is, acts upon the Chyle) afterwards it is dispatcht into the Lacteal Ducts, then into the Blood, and breeds a Tertian. We find the cause of this Ague therefore in an Obstruction of the Tubes, and do think, that the Particles are more sulphureous and thinner in this, than in other Agues. There may also be a great Cacochymy, yet without any disturbance in the Mixture of the Blood. At the beginning of the Fit the Pulse is rare and slow; because the Chylous Matter, that every four and twenty Hours is brought into the Blood, is unfit for Fermentation; and so the Ferment of the Blood abates, and

cold and shivering usually follow. When the mixture of the Blood is disturbed, no wonder, if Fermentation goes on ill, and Spirits are bred in less quantity and thicker, whereupon at length the Body grows unfit for Motion: For there is weariness always in a manner either from dissipation of the Animal Spirits, or from Obstruction of the Muscles.

We cannot always rely on the Duration of the Fit, as on a Sign of an exquisite or spurious Ague. In a Spurious all the Symptoms are milder, and sometimes therefore of longer continuance than in an exquisite Tertian.

Finally, all things may be a Procatartick Cause, which are able to augment and bring into act bad Humors, and therefore disturb the Blood; such as inconvenient Air, especially a Vernal, turned from the North, which being drawn by inspiration, does not only provoke the Ferments lying in the Tubes, to Fermentation, but by its ambient Frigidity hinders free Transpiration. But especially bad Food taken in too great a quantity and disorderly, excessive Watching, unseasonable Exercise of Body or Mind, sudden Passions of the Mind, some Excretions suppressed, Ulcers and Inflammations, may corrupt the Chyle and cause this Ague; according to the diversity of all which causes, especially the disposition of the Blood, more or less pituitous, melancholick, or serous, this Ague is sometimes legitimate, and sometimes spurious, and proves either longer or shorter.

§. 10. Ordinarily

§. 10. *Prognostick.*

Ordinarily there is but little danger in this Ague; yea, a Legitimate Tertian is reckoned as good as Physick, and so is a Spurious one; because by it the Blood is purged, no less than generous Wines by fermenting sometimes grow more generous. Therefore several call this Ague *Sanguinipurgium*, or Blood-purger. It may often likewise degenerate into other Diseases, to wit, a Continual Fever, or Quartan Ague, especially towards the latter end of Autumn, and into such diseases. Sometimes they kill Old Men; yea, several Instances of a mortal Tertian occur in Authors. A Jaundice coming upon a Tertian, puts an end to it. Ordinarily this Ague ceases with seven or ten Fits: If it proceed further, it is the more difficult to Cure. The sooner Concoction appears, the sooner it is over. A white Cloud in the Urine, as a sign of Coction, argues the Ague will quickly be at end; but when there is no Sediment, it is a sign it will be longer. The more violent the Symptoms are, the sooner it is at an end, if it intermit perfectly. Though the Lips be sore, it may sometimes last a long time. If a bastard Tertian continue long, it may easily bring upon the Patient a Dropsy, swelled Spleen, &c.

§. 11. *Dietetick Cure.*

WE now come to consider the Dietetick cure of a Tertian. Therefore let the Air be temperate, serene and pure.

Meat of good Juice and easy Concoction must be moderately taken out of the Fit; but in it must be altogether forborn. Avoid sweet things, but especially over high Seasoned and Smoak-dried Meats, Phlegmatick and watry things taken while the Body is hot. And all manner of Food taken to excess or disorderly, all Meats that are gross and hard of Digestion, must be forborn.

Drink must be rather temperate than hot. Altering Tinctures, Spirit of Nitre dulcified, of Salt, of Mars dulcified; or strengthening Tincture of Cordial Flowers, Roses or Violets, &c. may be dropt into Beer. Wine must either wholly be forborn, or a little may be drunk with Juice of Currans or Raspberries, or with Spaw-waters.

Sleep must be procured by Opium, for a secondary intention, mixt with Antifebriles, or Emulsions of Almonds and Poppies: For Watching is exceeding hurtful.

Rest is better than Motion; for Digestion of the Juices is best performed, while the Body is quiet.

The *Belly* must be kept loose: If it is Costive, it must be kept open with Lenitives, Clysters, or Suppositories.

Let the *Mind* be kept quiet. Anger, Grief, Care, Frights, &c. must wholly be avoided.

K k k

§. 12. *Pharma-*

§. 12. Pharmaceutick Cure.

HAVING considered the Dietetick Cure, we hasten to the Legitimate Method of healing, upon which the whole stress of the business lies. First, therefore let us see the Method of the *Galenicists*, which consists in removing the cause, which they reckon to be Excrementitious Bile. Hence they commend Evacuaters, Preparatives and Alteratives; and because they believe the source of the Matter is in the Melaraick Veins, therefore they hold, That the vicious Humor should be evacuated, and, if need were, be prepared, before it infect the good Blood. They therefore evacuate the first Ways, either by Clysters, or by giving Lenitives of Syrup of Roses Solutive, Marina, Cassia, to which they add Rhubarb, Agarick, or leaves of Senna, according to the Nature of the peccant Humor. And if the Patient be troubled with the Heartburn and Nauseousness, they advise Vomits.

As to letting of Blood, though Bile in the Melaraick Veins require it not; yet if there be a *Plethora*, they advise bleeding, and not presently at the Beginning, but they open a Vein in the State, and at the time of Intermision.

After these things they give such Medicines as correct the excessive Qualities of the bilious Humor. Such are Coolers and Moistners, which have a virtue of cleansing the first Ways, and checking of Putrefaction; such as in their Opinion, are, Dandelion, Endive, Cichory, Sorel, the four greater cold Seeds, Juice of Citron, Raspberry, &c.

and Emulsions, Syrups or Electuaries made of them. To which in baltard Tertians they order the adding of things that respect Phlegm and Melancholy, roots of Fenil, Grass, *Asparagus*, Polypody, *Cardius Benedictus*, lesser Centaury, Spleen-wort, Wormwood. *Riverius* highly commends Cream of Tartar. Their Specificks are, Dandelion, Chamomil, lesser Centaury, Plantain, Devils-bit, &c.

After Purges and Vomits they commend divers Diureticks, that is, Emulsions of the four cold Seeds made with Barley or Strawberry-water, or Decoctions of Grass, *Asparagus*, Fenil, Maiden-hair, red Vetches, Chamomil Flowers, Wormwood, Whey, &c. Thus if Nature endeavour to expel the Matter by Sweat, they say it must be promoted by giving of Sudorificks either before or in the end of the Fit; and in pure Tertians, wherein Nature uses to move Sweat in the end of a Fit, let the Patient drink Barley-water, or water of *Cardius Benedictus*, Sorel, &c. In baltard Tertians they give hotter things, which taken a few Hours before the Fit, oftentimes remove it.

If the Ague will not yield to these said Remedies, and there be Signs that some of the *Viscera*, Liver, or Spleen too is affected, then, they say, care must be taken of it; and indeed, because the Liver, according to them, in baltard Tertians, is obstructed with thick Bile or gross Humors, which infect the Blood, they advise the using of such things as correct Bile. For which end they praise Wormwood above all other things, because, they say,

say, it has a Virtue to deterge Bile, and to carry it off by Stool and Urine, next to which in virtue is lesser Centaury; wherefore they magnify Trochises of Wormwood, Rhubarb, Gentian, &c.

Among external Topicks they extol above all things a Plaster made of Cobwebs, *Unguentum Populeum*, leaves of Shepherds Purse, Nettles, Crowfoot, and other Velicatories.

§. 13.

THE Paracelsists and Helmontians do here boast of their Secrets; of which we have already spoken.

§. 14.

VVith his Intentions of curing this Ague, are these following. 1. The Restitution of the Blood to its natural temper. 2. The prevention of the deprivation of the Nutritious Juice. 3. The checking of the Febrile Fermentation, that a Fit may not come. As to the first, he Vomits, Bleeds, and Purges in the Beginning. For Vomits do good, as they cleanse the Stomach, that the first Concoction may the better be performed, and especially, as they empty the Gall-bladder by straining the Bile abundantly out of the *Meatus Choledochus*, that thereby it may be more plentifully drawn out of the Mass of Blood, and that so the Blood may be cleansed from the Excrements of adust Salt and Sulphur; but he thinks these things should be omitted in weak Constitutions. He says, That bleeding relieves, inasmuch as it

cools and ventilates the Blood, so that it is not so much roasted. Purges do good, as they fetch the Bile out of the Bile-Vessels, and consequently out of the Mass of Blood. Above all things he commends Potions or Infusions of Rhubarb and Senna, by which remedy alone, keeping a low Diet, with outward applications to the Wrists and Breast, I have seen Tertian Agues cured. For reduction of the Blood he commends Digestives, and sower things, inasmuch as they check Fermentation and heat of the Blood. He has seen this Ague cured by change of Air. He says that abstinence and a low Diet has often cured a Tertian.

But if a Tertian Ague have rooted it self through some Error committed either in Diet or Physick, towards the latter end he praises Decoctions made of Herbs and Roots, that are gently Diuretick; as also Electuaries made of Conserve temper'd with Salt Nitre, or the fixt Salt of Herbs, mixt with testaceous Powders and Spirit of Vitriol.

When the *Crasis* of the Blood is a little amended, so that the Urine is clearer, and not so tinged, with an abatement of Thirst and Heat, then he admits of things to stop the Fit; for which end he gives the Jesuits Powder, or Powder of the Bark of Ash, Tamarisk or Gentian, with Salts mixt with them, in White-wine. Nor does he omit Plasters to the Wrists and the Soles of the Feet. In the end of the Ague, he says, a gentle Purge must be given, and a more plentiful Diet may be allowed.

§. 15.

SPIDIOUS in the cure of Agues has not so much regard to the distance of Fits in Agues, as to the diversity of the concomitant Symptoms, namely of Cold and Heat. In Tertians therefore which happen in the Summer-time in a young and virile Body, he thinks, that the Cure should otherwise be insisted on, than in Tertians, which come in Winter, and afflict Old Men and Children. For in the former fort Bile abounds, and in the latter Phlegm. And according to the presence of this or the other Humor, he says, the cure must be varied. If therefore in a Tertian there be great heat, and the Patient be Squeamish, with a bitterness in his Mouth, he says, it is a Sign, that Bile is turgent in him, and affects a way upwards; for which end, on the intermitting day, or if the Fit come after Dinner, on the day the Fit comes, four or six Hours before it comes, he is for giving a Vomit of Glasse of Antimony or *Crocus Metallorum* in a moderate Dose, infused over Night in some convenient Water, suppose Cichory or Fenil, adding a little of some Cholagogue Electuary or Syrup, to the end the Humor that tends most upwards, may be carried off by Vomit, and that which inclines downwards may pass by Stool. Afterwards he inculcates, that we should have good regard to the Humors, and so he questions not, but this Ague may easily be Conquered.

§. 16.

IN this Ague ~~we~~ do our whole endeavour, that the Febrile Ferment, generally lurking in the first Ways, and already communicated to the Mass of Blood, may be washed out and corrected, and afterwards the excessive Fermentation of the Blood may be checked, that the most urgent Symptoms may be obviated, and the decayed strength, and ruined *Viscera*, may, as far as possible, be restored. The special Method of curing a Tertian, and all Agues, proceeds two ways, and with two Medicines. 1. Out of the Fit. 2. Before the Fit. The Febrile Ferment may very well be removed out of the first Ways by Vomits and Purges, which must presently be given at the Beginning of the disease, especially if there be Nauseousness and a Disposition to Vomit. But when there is a great Agitation in the Body, then we think we should rather abstain from them. For then if you should give Aloëticks, Diagridates, Antimonial, and other strong Medicines, you will add Fuel to the Fire. Therefore we should be content with gentle things; to wit, Cassia, Manna, or only an infusion of Senna with Rhubarb, and Syrup of Buckthorn: And because these are bitter, you will do more good with them than with others, tho stronger, which must be given, as other things, on the intermitting day. In Nice People and Children, Clysters are good in the Beginning and End of the Fit; and I have experienced this with good success in my Practice. For without all doubt a certain

certain Matter was separated from the Blood, and discharged into the Guts, which vitious Matter, if it be discharged by Clysters, the next Fit will abate much of its violence.

As to Purgatives, here, as we said in the preceeding Chapter, Physick Infusions and wines are proper of tops of Worm-wood, lesser Centaury, Flowers of Cichory, root of Gentian, Plantain, Dandelion, Rhubarb, leaves of Senna, adding some Spike, which may be infused in a sufficient quantity of Rhenish-wine; for instance;

Take of root of Fenil, Gentian, Butchers broom, Cichory each three Drachms, leaves of lesser Centaury, Goose-grass, Wall-rue, Worm-wood each half an handfull, Bark of Contrayerva one Drachm, leaves of Senna one Ounce and an half, Rhubarb three Drachms, Seed of Caraway, Anise, Fenil each two Drachms, Crude Tartar half an Ounce, quilled Cinnamon two Drachms. Cut them, and put them in a Bag for a measure of Wine. Or,

Take of leaves of Cichory, Dandelion, Wormwood each one handfull, root of Cichory, Gentian, Plaintain, Monks Rhubarb each one Ounce, true choice Rhubarb half an Ounce, Spike one Scruple. Make an extract with Spirit of Wine.

Also Pills, Electuaries, Potions, Powders and Apozemes may be prescribed according to the diversity of this or the other peccant Humor. But I have no mind here to give Receipts of them all, since

every young Physician may easily make them out of the aforesaid. *Elixir febrile Mynsichti*, *Elixir proprietatis*, and all bitter things are good. Hence the Dutch use the Electuary of *Hiera Picra* much, by which alone they cure Agues.

A great Controversy among Practitioners offers it self about letting of Blood, whether it be necessary in a Tertian Ague? It is answered in the Negative, especially since it is evident, That thousands have been cured without bleeding, and much in these Countries; and since daily experience shews, That such as accustom themselves much to letting of Blood, are subject to Fevers; and further it shews, That Agues are prolonged by it, that it neither abates a Tertian nor a Quartan, but rather encreases them, it is our advice to forbear letting of Blood. But if strength be good, and there be a *Pletthora*, sometimes it may be allowed. But what benefit can bleeding bring to the first Ways?

And this by the way must be observed, that in Tertians it is ever better, that the Fit should Postpone than Anticipate: The reason is obvious, because when the Fits come later, it is a Sign, that either the Febrile Ferment is diminished, or at least moves more slowly out of its *Focus*; both which are good signs in diseases, especially in Agues.

Out of the Fit, or on the intermitting days, Medicines must be given, that resist Sharpness and Viscidity, and open Obstructions, to wit, *Anima Rhabarbari*, Antimonial Medicines, *Clyssus Antimonii*,

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monii, Whey of Goat's Milk, *Tinctura Martis absynchiaca*, *Arcanum tartari*, *Tinctura Martis arcano tartari parata*, *Elixir vitrioli Mynsichti*, *Mixtura simplex*, *Mixtura aperitiva* or *antiscorbutica*, *Spiritus aperitivus Penotii*.

And the Febrile Effervescence may be checked with Precipitators; by which alone, without Purg- ing either upwards or downwards, or Bleeding, we have cured several Agues, and towards the latter end we gave a Purge. Among Precipitants we reckon all Earthy things, such as their *Terra Sigillata*, also Coral, burnt Harts-horn, Chalk, Irish Slate, blew Crabs eyes taken out of live Crabs, Shells and the *Antifebrilia Sennerti*, *Strobelbergeri*, *Mynsichti*, *Crollii*, Pearl, precious Stones, especially *Lapis Lazuli*, a Drachm of which given with some proper Vehicle is a secret in all Agues. But who can recount all Precipitants? Jesuits-Powder, root of Gentian, Silverweed, Plantain, Bark of *Guajacum*. Here is a Receipt;

Take of the remainder of Spirit of Sal Ammoniack half a Scruple, vitriol of *Mars* thirteen Grains, Jesuits Bark powdered one Drachm, *Specificum Crollii* two Scruples. Mix them. Make a Powder to be divided into two equal parts.

Here also, as in all Agues, Cinnabar of Antimony will be proper, things that Vomit and Purge being premised. For it has a virtue of precipitating febrile Ferments and of restraining the violent Motion the Spirits. It must be mixt with the aforesaid opening Pre-

cipitants, and Opiates; for instance;

Take of Cinnabar of Antimony, *Antimonium Diaphoreticum*, Crabs-eyes each one Scruple, *Tartarum Vitriolatum* half a Scruple, Powder of Shells one Scruple, *Theriaca celestis* six Grains. Mix them. Make a Powder, and divide it into two equal parts. Or,

Take of the *Arcanum* of Spirit of Sal Ammonick and Vitriol each two Drachms, *Essentia anodina* one Drachm, Oyl of Pepper, Camphore each one drop. Mix them. The Dose from fifteen to twenty drops or more in a proper Vehicle.

It is a good way in Agues to mix opening, Diuretick Salts with Precipitants, and to give two or three Doses, an hour successively one after another, before the Fit. For these Salts joyned with Precipitants, will carry off what is precipitated of the Ferments in the Vessels. *Arcanum duplicatum* with native Cinnabar or *Mercurius dulcis* is an excellent Medicine for curing Agues. If a Man knew how to make a Salt of the Combination of Spirit of Sal Ammoniack and Spirit of Salt, mixt with Cinnabar of Antimony, he has a secret where-with he may cure all Agues, especially a Tertian. Antimonial Medicines are all proper in this case, and Terrene Powders which have an occult Salt. Also Aluminous Medicines are good, but they must not be mixt with other Salts: and Martial ones especially. For amending the Constitution of the Blood, and the Tone of the

the Bowels, in the mean time any attemperant and digestive Medicines are good; that is, such things as hinder any great disturbance in the Blood, and by separating, and as it were precipitating its Feculencies send them towards the Emunctories. To which end, Whey boyled with a little Cinnamon or Aniseed, or the following Antifebrile Potion, will conduce.

Take of Water of *Carduus Benedictus* two Ounces, Salt of Wormwood one Scruple, *Arcanum duplicatum* five Grains, Syrup of *Carduus Benedictus* three Drachms. Mix them. Make a Potion.

All fowre, saline, terrene Powders are here proper, that is, of Tartar, Nitre, fixt Salts of Herbs, Wormwood, *Carduus Benedictus*, *nitrum preparatum*, *antimoniâ*, *chalybeatum*, the excellent Antifebrile of *Wedelius*, which is made of *Nitrum vitriolatum*, *Antimonium Diaphoreticum*, Shells, Mother of Pearl, Crabs eyes, burnt Harts-horn, Salt of Wormwood, lesser Centaury, adding a little *Opium*, and a drop of Oyl of Cloves, Pepper or Camphore. I have oftentimes given first a Vomit of two Grains of Emetick Tartar with Salt of Wormwood, and then the following Powder, whereby I have cured several Tertians.

Take of Shells, Irish Slate each one Scruple, Native Cinnabar Ten Grains, *pulvis anodinus* five Grains. Mix them. Make a Powder, for once taking before the Fit.

Gentian root with a little *Nux Vomica* will be better here than Je-suits Powder. *Vitrum Moscoviticum* given three or four times, a Drachm at once, is good in all Agues. *Sal Polychrestum* is of excellent use. It is made of Salt of Wormwood, lesser Centaury, Sal Ammoniack and Tartar, with a little Vinegar poured upon them. Here is a Receipt.

Take of *Antimonium Diaphoreticum* one Scruple, *specificum febrile Crollii* one Scruple, *Arcanum duplicatum* twelve Grains, *Sal Polychrestum* half a Drachm. Mix them. Make a Powder. Divide it into three equal parts.

Or give this following two hours before the Fit;

Take of Harts-horn Philosophically calcined one Scruple, Salt of Wormwood, *Carduus Benedictus*, Furnitory, each seven Grains. Mix them. Make a Powder; after it is taken, let the Patient compose himself to Sleep.

For such Medicines expel the Seeds of the Ague, and restore the natural Ferments of the Bowels, which are almost destroyed. Opia-tes are of no contemptible use in Agues, especially *essentia anodina Zwelferi*, *theriaca celestis*, &c. which may be joyned with other Antifebriles. And so divers Marti-al, Saturnine, Aluminous Medicines, &c. often conquer this Disease; for instance.

Take of crude Alum, Nutmeg each one Drachm, *Olibanum*, Pepper each five Grains, Oyl of Cloves one drop. Mix them. Give one Drachm in Centaury or some such like Water.

If continual Sweating accompany an Ague, this following is good.

Take of Salt of Wormwood, lesser Centaury, *Cardius Benedictus*, Tamarisk, mix them with a little Spirit of Salt, just as much as they will imbibe. Add two Drachms of Cream of Tartar, and mix them. Give one Scruple or half a Drachm Morning and Evening.

Also *Nitrum Saturninum* or *Tinctura Antiphthistica* may be given in this case. Excellent Medicines for Tertians are made of Nitre. This following is commended in the *German Ephemerides Ann.* 2. Obs. 196.

Take of Nitre two Ounces, Borax two Scruples, Sal Ammoniack half a Drachm, Flower of Sulphur half a Scruple. When the Nitre is melted in the Crucible, add the rest by degrees; when they are all well joyned, pour the mixture upon a bras Table, or Dish.

In a Tertian, and in all Agues we advise violent Motion before the Fit, either on Horse-back, or by playing at the Ball, &c. If an Ague come from Worms, as Authors hold, things good for the Worms must be mixt with Antifebriles. For which end Medicines of Myrrh and

other bitter things, mixt with *Mercurius dulcis*, are good.

By the way observe, an Oedematous swelling of the Feet, and sometimes the Beginning of a Dropsy, attends a ballard Tertian. The reason is, because Patients oftentimes drink uncorrected Liquors. In which case Motion and Labour must be ordered, and things must be given to strengthen the Stomach and the Blood; among which these things excel, viz. *Nitrum Antimoniatum*, and other Nitrous and Martial Medicines, *tinctura martis*, *bezoarticum minerale*, *arcanum duplicatum*.

Among external applications we commend Garlick mixt with Salt and Saffron, and applied to the Wrists. *Platerus* commends the inner rind of Hazle Branches steeped in Vinegar, wherewith he has cured several. *Cnaelius* commends this following;

Take of Cypress, Turpentine one Ounce and an half, liquid *Styrax* half an Ounce. Melt them in a Copper Dish. Then take twenty large Spiders, bruise them, and mix all in an earthen Vessel with a wooden Pestil, till the Spiders no more appear, and the mixture look of an Ash-colour. Add to the mixture, made warm a little, of Powder of Toads, Gunpowder, Powder of Serpents Heads, Sal Ammoniack each six drachms or an Ounce, common Salt, Salt of lesser Centaury each half an Ounce, Camphore two Drachms, Chinney Soot what is sufficient to tinge it. With Febrifuge Oyl what is sufficient make a Mass for an exceeding black Plaster. Of this Mass make two round Plasters,

Plasters, about the bigness of a Crown piece, which must be covered with leaf Gold or Silver, and an hour or two before the Fit applied to the Wrists, and there left for nine days. Then at the very same hour they must be taken off, and thrown into the River.

Externally also Juice of Nettle, Silver-weed, or Plantain is good to apply to the Wrists. The Herb *Iberis* (it is *Fludd's* experiment) may be applied to the Soles of the Feet; and so may the inner Rind of Wall-nuts steep in Vinegar. *Strobel-bergerus* has Febrifuge Plaster of Air, Fire, Water and Earth, is good, *i. e.* of Cob webs, because they are in the Air; of Soot, which is made by Fire; of Turpentine, because it is Fluid; and of caustick Crowfoot, which grows on the Earth.

The Liver of a Partridge with Yarrow-water is a good Empirical Medicine.

For recruiting of Strength and the Bowels, mixtures must be used of temperate Cordial waters, with Pearl, Crabs eyes, *Antibellium Poterii*, and such like Preci-

pitants added in a due Preparation, putting in a little Sugar of Pearl, for the tast's sake.

You may find the cure of the Symptoms in the last Chapter of this Book.

A double Tertian is cured with the same Medicines; yet with this difference, that the Body must be oftner purged in this than in a Simple Tertian; nor must the Sudorifics be so strong here, as in the Simple, because the coming of the Fit every day weakens a Man much. But since we are of opinion, that a Quotidian and a double Tertian differ not at all, we shall not treat of it twice, but you may see a Quotidian Ague.

In a Scorbutick Tertian where Spots appear all over the Body, and Pimples break out with pain, Antiscorbuticks must be mixt with Febrifuges: for instance;

Take of *Aqua Antiscorbutica* fix Ounces, Essence of Buck-bean one Drachm and an half, *Elixir Antifebrile* one Drachm, *Syrupus Scelotyrbicus* one Ounce. Mix them. Give a Spoonful on the intermitting day, and before the Fit.

CHAP.

CHAP. IX.

Of a Quartan Ague.

§. 1.

NOW we are come to another sort of Ague, which is called a *Quartan* from the number of the fourth day, when it afflicts a Man. This disease is so Pertinacious and Refractory, that it is become a Proverb;

Hydrops, Quartana, Medicorum scandala plana.

And *Richardus* the Physician calls God; and all that is sacred, to witness, That he could never attain a competent Knowledge neither of Epidemical diseases, nor of Womens Conception, nor of a *Quartan Ague*. It has two days of Intermission. The Ancients called it *Melancholica*, from the efficient Cause. *Pliny* calls it *Quadrjma*, from its fourth day Circuit. *Plantus* calls it *Querquera*. It is described to be a preternatural Effervescence of the whole Mass of Blood, afflicting the Patient every fourth day, with Shaking, Thirst and violent Heat, arising from a Febrile Ferment, lodged generally in the Vessels of the Spleen, which disturbs the Mixture of the Blood.

This Ague is Simple or Com-

pound. Simple, when but one Fit comes in one day. Compound, when two Fits come every fourth day, as I observed in a Citizen of *Hanover*. I observed it also to come in one Man at *Cassel*, every fourth and seventh day. That is Compound also, which comes on the intermediate days, and it is either double or treble. That is double which intermits one day and comes two; that treble, which comes every day. One is called *Hepatick*, which has its course in the Liver; that *Splenetick*, which has it in the Spleen; and that *Stomachick*, which has it in the Stomach; But we admit not of this difference.

§. 2. Part affected.

AS in a *Quartan*, the Heart is reputed for the Part affected; because the Heart was reckoned by the Ancients the Fountain of Life and Heat. For according to *Galen*, *de differ. febr. l. 1.* no excess of heat can be called a Fever, unless the Heart be hot. But the Ancients reckon the *Focus* or subject of the cause, to be the Mesentery with its Vessels; and the Spleen, as it is the Fountain of Bile,

2016,

Wise, setting aside all Prejudice, do think the cause lies in the Stomach, *Pancreas* and Spleen, which is reckoned the chief Lodging of thick, dirty, dreggy and earthy Matter. Nor do we here exclude adjoining Parts and Vessels, the Guts and Chyliferous Ducts, when they are obstructed: from which obstruction of so many Parts and Passages, it cannot otherwise be, but an acid must be encreased, and exercise its Tyranny every where. We have testimony of our opinion, *tract. de febr. c. 6. l. 9.* who shews, that the Spleen suffers much under the Torture, if a Quartan; so that it becomes the sink of black and retorrid Matter. But he subjoyns, that its Seat is not in the Body of the Spleen, but in the Arteries, if not in all, at least in some, since this Part above all others abounds in Arteries.

Sylvius does in this, as in other Agues, acknowledge the *Pancreas* only for the *Focus*.

§. 3. Diagnostick.

LET us now see the Diagnostick Signs; some are common, others proper. The common, which are in all Agues, are, pain in the Head and Loyns, heat and cold, thirst, yawning and reaching, a preternatural frequent Pulse, &c. They are proper Signs, as they are competent only to such a sort of Ague. In regard therefore of the Motions of cold and heat a Quartanary Circuit is an infallible sign of this Ague; so also in regard of duration and time, while the Fit holds a Man, there arises another sign of this Ague; for

it lasts sometimes twenty, sometimes four and twenty hours, with a kind of sower Sweat. Those that have this Ague are very hungry, because of the Acid, and they have often a depraved Appetite, like those that long; their Body is dull and prospers little, their Strength is low, they are Morose, they chuse a sedentary life, they are great spitters, their Pulse is weak, because there is no Spirit in the Chyle nor Blood. *Galen* magnifies the Testimony of the Pulse, so that, 2. *de crisi. c. 4.* he Boasts, how to know by that alone, an Ague was at Hand, and that he foretold it would prove a Quartan: But *Campegius lib. 1. Hist. 9.* denies that this is possible to be done.

We must briefly also consider the Signs of the Subject or Febrile Focus. The signs of the Spleen being affected are reckoned to be, a leaden colour of the Body, the swelling of the left *Hypochondrium*, which *Sylvius* ascribes not to the Spleen, but to the *Colon*. The *Pancreas* also acts its part here, by its over acid Juice.

The Urine varies very much both as to colour and consistence, sometimes it is white, sometimes black, and sometimes inclining to red. In the Beginning the Urine is generally watry and crude, in the Process of the disease it is higher coloured and thicker, The Sweat is copious and stinking, smelling generally sower, which the Patients themselves usually loath. This Ague uses commonly to come in the Afternoon.

§. 4. Cause

§. 4. Cause.

THE more exactly any one knows the causes of diseases, he may the safer, sooner and more pleasantly oppose Remedies to a disease, and to its Causes. We shall endeavour to find them out, and build the whole cure upon them, as on a Foundation. The *Galensists* make the immediate cause of this Ague to be a kindling of Humors in the Heart. The more proximate, mediate causes are with them Putrid Vapors, exhaling from a Melancholick Humor; which is fourfold. 1. Of adust Blood. 2. Of Salt Phlegm. 3. Of adust Bile. 4. Of a Melancholick adust Juice, like burnt Lees. Thus *Avicenna* will in this sense have a Quartan to be either Sanguine, Bilious, Phlegmatick, or Melancholick. *Hippocrates de natura hominis* will have a Quartan, as all other Agues, to come from yellow Bile, but mixt with black, where, he says, you may know it by this; because Quartans are caused by a Melancholick Humor.

§. 5.

THE *Chymists*, according to their Principles, hold, That a Quartan is produced of Nitro-sulphureous impurities. Some of them ascribe Quotidians to Mercury, and Quartans to the Element of Earth. *Quercetan* in a Quartan accuses Tartar, the common Enemy of our Nature.

Charleton, following *Willis*, shows, that in a Quartan, the Blood being spoyled of its sweet, spirituous and balsamick Nature, con-

tracts a certain acid, penurious and a little austere Nature, as we see Wine and Beer grow sowre, when the Lees are unsettled, and the Spirits depressed by Thunder, Just so the Blood degenerating much from its native Purity, and being so full of sowre Dregs, as to fix the Spirits, cannot rightly concoct, nor at all assimilate the fresh Chyle, that comes into it; but corrupts it into a strange Liquor, whereof, when the Vessels are full, a certain *Fluor* of this Matter ensues, and as it were a spontaneous Effervescence, causing an Ague-Fit with cold and heat.

§. 6.

According to *Belmont* only a Quartan Ague reaches farther than the Stomach. In discoursing of it he talks of the *Archæus* of the Place, how in its own Territories it commits an Error in Digestion, which at set times shews its fury. According to him it ceases of it self, and returns perhaps again in a Month, and is cured naturally of its self. Sometimes he has seen it cured by a *Crisis*, and many Stools. He derives its Original from an acid Chyle carried into the Spleen.

§. 7.

According to *Willis* the cause of this Ague is Blood degenerated into an acid and Austere Nature, like eager Wine, Alum, or Tartar, consisting of much Earthy and Saline Matter, by which almost a third part of the Chyle is turned into a certain Fermentative Matter, which every fourth

fourth day is exalted with the Blood, and causes a new Effervescence.

§. 8.

SPIGNIUS thinks the cause of this Ague is Phlegm, sometimes grown glutinous and plentiful, because of the cold of the Winter and Spring; by which tenacious Phlegm, he holds, that contumacious Obstructions are made in the lateral Ducts of the *Pancreas*, and that double and treble Quartans proceed from more of the lateral Ducts being obstructed at the same time, but opened at several times.

§. 9.

THESE things thus considered, one would think none could well doubt of the true and genuine cause of a Quartan Ague: ~~but~~ will therefore briefly give you, what we think of the Matter. We make no question therefore, but in this Ague the Ferments are more in quantity and more viscid; whence there are not only Obstructions of more Vessels, but they are more contumacious; and so the Mixtion of the Blood is disturbed. For the Enemy has not only possessed the Mass of Blood, but has reduced all the rest of the Humors, yea, the very Chyle, into an acid Paste, which being so depraved must needs be attended by a disorder in the Mass of Blood, Juices and Parts of the Body. And the reason, why the Fit comes so slowly, is the Viscidity of the Ferment clinging to the Vessels of the Spleen and *Pancreas*, and the Tenaciousness of the Blood, which comes slowly thither.

The condition of the *Focus* is the straitness of its Passages, wherein dull, tough and tartareous Particles are contained, especially in the chyliferous and other Ducts; for in a Quartan the saline Particles of the Chyle are exalted, which the Blood cannot conquer. For this Ague is generally produced by a vitious, acid Chyle. We learn, that there are these causes in a Quartan; because all Quartanary People have either a contumacious Obstruction in some of their Bowels, or a great loss of Tone and a Viscidity in all Parts designed for the first and second Concoction, or an acid Crudity gathered from viscid, acid, and ill figured Particles. For the slow coming of the Fits shews, that the Matter is very inept for Fermentation.

That in a Quartan something sharp is mixt with a very Viscid, and as it were immoveable Humor, appears from yawning, cold, shaking, and pain in the Bones, caused thereby; by which Symptoms first of all accompanying the Fit, it is generally distinguished from other Agues or Fevers.

The reason of the Head-ach is, because the thick matter sticks in the Capillary Veins, and cannot perform its Circulation. For the cold continues longer than in other Agues; because the Febrile Matter cannot so soon extricate it self and insinuate into the Blood, so as to ferment with it.

Restlessness is produced by sharp, cutting Particles.

There is not always a Melancholick intemperature in this Ague, unless you understand by it a thick Matter, which if it be very thick and

and contumacious, the Agues become Sextans, Octans, &c. Because a thick Humor is not apt to ripen and break out, but rather causes difficult Obstructions.

As to the remote causes, they are either natural, as Complexion and Age, so that which we call a Melancholick Complexion, is subject to a Quartan. The Age most liable to it, is from forty and upwards, according to *Hippocrates* 3. *progn.* 28. Or Non-natural; of which we shall treat in the Dietetick Cure.

§. 10. Prognostick.

IF A Quartan come in Autumn, it will be the more pertinacious; because all the Humors in the Body are then more fixt: for the Spirits fly away in Summer; and so Quartans usually hold Men in Winter, and then a Cachexy, Dropsy, Scurvy, &c. may easily follow this Ague; because in time of Autumn, the Humors grow thick, the Bowels are weakned; and there is a loss of Tone in all the Parts designed for the first and second Concoction. A Quartan is seldom dangerous, especially in hot Countries; yet it is a tedious and slow disease; so that it lasts sometimes above two years; which I remember befel many, especially such as after an Epidemick disease, or a Malignant Fever, fell into it, as it happened to me at *Leyden* in *Holland*. Of it self it is not dangerous, as I said, but it may prove so occasionally, as it may end in grievous diseases, which I mentioned before; for it often ends in the Scurvy.

Hippocrates 1. 1. *morb. vulgar. comm.* 3. *text.* 4. reckons up the

benefits of a Quartan. They that are sick of it are never seized with any grievous disease; and if they be held of any grievous disease, and a Quartan supervene, it cures them. We may instance in a Convulsion, from which Patients are freed by the coming of a Quartan, according to *Hippocrates* 5. *Aph.* 70.

Children are more easily cured of it, than middle Aged, and very Old Men.

Summer Quartans are usually short; Autumnal long, especially such as come near Winter; for the more violent the Obstruction of Vessels is, the longer the Ague will prove.

Gabelchoverus *cent.* 6. *Obs.* 74. gives instances of Quartans, that lasted seven, twelve, one and twenty, thirty, yea, forty eight years. It often goes off by Vomiting, when abundance of crude Humors are brought up out of the first Ways. Sometimes it ends in a *Crisis* by Sweat, thick Urine, the *Menses*, Hemorrhoids, bleeding at the Nose, Abscess, or Itch.

If a Quartan seize those, that have sound Inwards, and are strong, the case is safe. It usually goes off about the Solstice or Equinox.

When simple Quartans turn double or treble, they are dangerous.

Crato says well in *Epistolis Scholæzæ* *consil.* 257. that a Quartan scarce ever goes off, but it leaves some ill Effects behind it. That which may be most feared by Quartanary Persons is Hypochondriack Melancholy, the Scurvy, or Dropsy.

I have often observed this Ague turn to the Colick: for this vitious and corrosive Acid, having parted from

from the Mass of Blood, and got about the Membranaceous sensible parts of the Mesentery, predominates there; and these corroding, cutting, and pricking Particles in process of time rend and tear the Fibres, which being very sensible are contracted with a great disturbance of the Animal Spirits: and the Convulsions are sometimes continued from the Guts and *Abdomen* to other parts.

A Case.

THE following case happened in a Gentleman's Wife, whom by GOD'S blessing I cured. This Gentlewoman was about six and thirty years old, of a Choleric and Melancholick Complexion, of a tender, lean and thin Body. She had been taken about five Months before with a Quartan; but had put by the Fit with various Precipitants and Absorbents. Yet there remained violent pains in her Belly, Watchings, Belching and Wind, which distended the *Abdomen*, Oppression at the Heart, and at last Swoonings; and when she was even at death's Door, she was successfully cured with the Remedies, that shall hereafter be mentioned.

§. 11. *Dietetick Cure.*

NOW we will look after the Diet. Because all hope of cure depends upon ordering it aright: for the choicest Medicines will do little good, unless the Patients obedience concur with the Physicians diligence. The *Aer* therefore must be moderately hot, pure, clear, and it must be often changed. Avoid a cloudy, marshy and Sea Air; for Quartans are frequent on the Sea Coasts. The Au-

tumn is very fruitful of Quartans; if a hot Summer preceeded, and the Autumn be rainy: for such a Constitution of Air produces Epidemical Quartans; as it happened at *Hanover*, 1682.

§. 12.

THE Meat must be of good Juice: at the Beginning of the disease it must be small. It may very well be tempered with Borrage, Bugloss, Cichory, Parsly, Capers, Cinnamon and Saffron: Yet in process of time a fuller Diet will be proper, lest strength might fail; because it is a disease of long continuance; as *Hippocrates* seems to intimate, 1. *Aph.* 6. And the time of Eating is better after the Fit than before, as he shews l. 1, *Aph.* 11. But mouldy Bread, Sea Bisket, and the Flesh of great Creatures must be forborn, especially if they be Old, such as Beef, Brawn, Dear, Pork, Hare. But *Quercetan dietet. polyhistor* l. 3. cap. 43. undertakes to apologize for Hares; and so seems *Martial* l. 13.

Inter quadrupedes gloria primæ lepus.

So among Fowls these are held to breed Quartans, viz. Geese, Ducks, wild Pigeons, &c. All the Guts and Extremities of Creatures are reckoned of the same Nature. Among Fish all such are hurtful as live in Muddy and Fenny places, such as Eels, &c. All Smoak-dried and powdered Meats are as bad as Poyson, such as Gamons of Bacon, dried Geese, Stock-fish, Herrings kept long in Pickle. Therefore all salt, sowre, viscid, glutinous

nous and windy Meats must be forborn. Unripe Fruit is bad, such as Pears, Apples, Chestnuts and Wall-nuts; because they breed gross Blood, and corrupt the Chyle. All Pulse is bad, so is Rice, Beans, Pease, Lentils, Melons, Pumpions, &c. All things that are seasoned with Vinegar must be forborn: for *Hippocrates 3. de ration. vict. acut. c. 38.* knew long since, that Vinegar was not good for Quartans. On the contrary some allow of Vinegar in Agues, because it cools, and opens Obstructions. But we judge, that Vinegar ought to be forborn, unless we will foment the cause of the disease. The Drink must be the best Wine, and medicated also. Whey, Barley-water, and martial Spaws are proper. But a Decoction of Agrimony especially is a great secret in this Ague.

As for *Motion* and *Rest*, we advise the Patient to stir often, to ride on Horse-back and in a Coach.

Sleep and *Watching* must be moderate.

The *Excreta* and *Retenta* must be agreeable to Nature, The Belly must be loose, either by Art or Nature. The Hemorrhoids must keep their accustomed course: for they cure Melancholy, according to *6. Aph. 11.* If they stop, they cause it. If the *Menses* come not at the usual time, they must be procured, otherwise tartareous Humors are gathered, and the Acid encreases.

The *Passions of the Mind* are able to produce a Quartan: for fear, grief, fright, watching and cares, as they walt the Animal Spirits, and so occasion this disease, must be avoided.

Some say, that Quartanaries may be cured with a sudden Fright, as by unexpected throwing of cold Water, at the sudden sight of Serpents, or Mice, or by threatening to throw them down a high Precipice.

§. 13. *Pharmaceutick Cure.*

NOW we have done with the Dietetick Cure, we will proceed to the Pharmaceutick Magazine, out of which we may take divers Weapons to destroy this Enemy. And we will go first to the *Salemat*. If therefore this Ague proceeds from a more Melancholick Humor, then they commend Moistners and Attenuants; but if it be any way adust, they advise Coolers, which Humors afterwards they will have to be evacuated by proper Medicines. They clear the first Ways by Lenitives and Vomits: Afterwards, if Blood abound, they open a Vein, and if it be thick and black, they let the more. When the Blood is evacuated, they say, the peccant matter must be prepared and concocted, and the disposition to breed bad Humors must be corrected.

If there is a mixture of Phlegm and crude Bile, they give Attenuaters and Incisers at first; Borrage, Violets, Maiden-hair, Bugloss, Endive, Furnitory, Cichory, Spleenwort less and larger, Germander, Ground-pine, Agrimony, *Cardus Benedictus*, root of Marsh-mallow, Liquorice, Polypody, all the opening roots, Bark of Tamarisk, root of Walnut-tree, Flowers and Seeds of Broom, *Agnus Castus*, Ash, &c. and they make divers Medicines of these things, as the

the nature of the peccant Humor requires.

They make their Purges, which they give after they have prepared the Matter, of Polypody, Mother of Thyme, leaves of *Senna*, Root of black Hellebore and *Lapis Lazuli*. And they have divers Compositions of them, such as *Syrupus de pomis Regis Sapor*, *electuarium diacatholicon*, *confectio Hamech*, *pulvis Diasenna*, *Pilule tartaree*, *Melanagoga*, *de Lapide Lazuli*, &c. *Galen*, the day before the Fit, gives a Vomit after Supper; the next Morning he gives the juice or infusion of Wormwood; and two hours before the Fit, some Treacle. Their gentler Vomits are Juice of Radish, with *Oxymel*, or a Decoction of Hyssop and Dill-seed. Their stronger are, *Asarum*, Hedge-hyssop, Elder, white Hellebore Root, &c.

Then, to discuss the Reliques of the Febrile matter, after Purges or Vomits, that is, when the Matter is concocted; they order Sweating Medicines to be given an hour or two before the Fit. *Galen* for this purpose had two Medicines; one of *Succus Cyrenais*, and another of Treacle. To this purpose he also commends Root of Gentian, *Cardus benedictus*, &c.

At length, when they have done with these, they go to Specificks, of whose acting they know not how to render any reason; such as Juice of Wormwood, Vervain, root of Masterwort, Plantain. Some crack of one Secret, others of another; but none can do what they promise. They also apply things to the Wrists; which we have mentioned before.

§. 13.

THE Paracelsists and Helmontians brag of their Secrets. For *Helmont* after he has laught at all the School-Remedies, propounds an universal Febrifuge, *l. de Febris*, c. 14. t. 7. and calls it *Præcipitatum Diaphoreticum Paracelsi*, or *Mercurius Diaphoreticus*. Externally *Helmont* commends a Plaster made of a few Dissolvents and Abstersives, but does not give its Description. But these are commonly thought to be its Ingredients, as you may see in *Grembs*.

Take of Wax one Ounce, *Syrax Calamita* two drachms, *Ladanum Liquidum* half an Ounce, *Asa dulcis*, the best *Olibanum* each three drachms. Mix them, make a Plaster.

It must be applied to the Spleen, whose *Archæus*, he thinks, is angered by the Acid of the Stomach, that he may be pacified by these sweet scented things; for which purpose he commends divers Unguents, with which alone he maintains, a Quartan Ague may be cured. He boasts how one draught of *Arcanum Corallinum* will cure it.

§. 14.

*VV*ILLIS advises Salivation, and Vomits in a Quartan, and he gives an Example of a Lady, who was so cured by him. He adds, that this Ague may easily be cured after the Winter Solstice, and, that sometimes it goes away

of it self: because at that time the Discrie of the Blood, contracted by the Summers heat, is almost gone off through the Winters Cold, and that old Mass of Blood begins like a Snake, to recover towards Spring. For, he says, the whole Cure consists in changing the Dyscrie of the Blood. He says, all remedies are good, which stop the Fit. And he thinks the Fit may be stopt by giving Vomits before the Fit; because Vomits often stop the Febrile Motion of the Blood, by raising a Motion contrary to it. But, he says, those things are surest, which purge not at all, but for a time communicate a certain Fixation to the Blood, or cause a precipitation of the Febrile Matter. He therefore uses the following Method, having first given a Vomit or Purge three hours before the Fit; he applies Plaisters to the Wrists, and gives some Ague-Powder in generous Wine, and he orders the Patient to sweat gently in his Bed. He would have this repeated several times. Above all other things he magnifies the use of the Jesuits Powder, and gives about two Drachms in Wine either small or strong infused two hours. By hot Constitutions it may be taken in distilled Water or Whey.

He also examines the Qualities of the Bark; and because it is bitter, he makes no question but the same Virtue may be found in root of Gentian, Snake-weed, *conaryerva*, &c. For all things that are actually bitter, as he says, have an excellent Virtue in crushing the Strength of Preternatural Ferments. He exhorts others also to enquire out other Simple Medicines.

and they shall find that in them, which oftentimes Art cannot imitate, towards the conquering several stubborn Diseases.

§. 15.

SPlising, who reckons the Cause of this Ague to be over glutinous Phlegm, which breeds contumacious Obstructions in this as in other Agues, commends Medicines that cut glutinous Phlegm effectually, and the diligent taking of things that lessen it, till Obstructions are opened.

§. 16.

IT remains, that we consider *Cartes* and his Followers, who may very well joyn Forces with us. This therefore is Our Method in curing a Quartan: First, all our intentions of Cure must be so directed, that the preternatural Acid in the Chyle, and other Ferments communicated to the Blood at turns, may be corrected, the Febrile effervescence checked, then that the crude Humors coagulated and made viscid, may be cut and made fluid, and being so prepared may be carried off by convenient ways, and that pristine strength may be restored to the Blood and Parts. Which things when they are duely done, there is Hope a Quartan may be cured effectually.

1. Therefore the Body must be kept loose, if not of it self, by a Clyster, or gentle Catharticks, either Pills, or the Powder following.

Take

Take of *Pilule Tartaræ Quercetani*, *Melanagoga*, *sine quibus* each one Scruple, Oil of Cloves one grain. Mix them. Make Pills of a Grain in Weight. Take fifteen or more at a time. Or,

Take of Powder of Rheubarb half a Scruple, *Pulvis Cornachini* five Grains, Oyl of Amber one Drop. Mix them. Make a Powder for once taking.

Or let the Physick-Wine, or Decoction be inciding and loosning: for instance;

Take of Root of Elecampane, Galangal, Zedoary, Gentian, *Acorus* each two Drachms, Tops of Wormwood, lesser Centaury each half a Handful, Leaves of Mint, Marjoram, Rosemary each one Pugil, Leaves of Senna three Drachms, Root of Rheubarb two drachms, Rind of Orange, Tamarisk each two drachms and an half, Filings of Steel in a Rag, or instead of it, Vitriol of Mars one Drachm. Cut them and steep them in Wine.

And such a Wine without the Purgers may be drunk after Meals, because bitter things especially Destroy Febrile Ferments. I would not have any one take Vomits, except he be inclined to vomiting, and the Stomach be loaded with tough Phlegm, and the Patient be strong. Otherwise it will do more hurt than good. See the German *Ephemerides An. X. obs. 30.* I do not allow of

Blood-letting, because it depauperates the Blood and spoils it.

2. For conquering the preternatural Acidity of Chyle, and correcting the Viscidity of the Humors, and quieting the Effervescence of the Blood, I think Jesuits Powder is the best, given in this, or some such way;

Take of Jesuits Powder finely powdered six Drachms or an Ounce, Salt of Tartar two Scruples, Leaves of Wormwood, *Carduus benedictus* each one Pugil, the best old Rhenish Wine ten Ounces. Infuse them over Night ten hours in a warm place. Then filtre it. Take four or five Ounces of it in the Morning, at four a clock in the Afternoon, and at Bed time, on the Intermitting days. Take a good Draught an hour or two before the Fit come, and again in the going of it off.

For the Poor you may proceed the same way with Gentian Root, *Guajacum* or *Contrayerva* Bark. So also the Jesuits Powder may be given with Purgers or Sweaters: for instance;

Take of Jesuits Powder one Drachm, Scammony six Grains, Salt of Wormwood half a Scruple. Mix them.

The following Tincture of Jesuits Powder is not of contemptible Use.

L 11 2

Take

Take of Jesuits Powder three Drachms, Salt of Tartar one Drachm, with Spirit of Sal Ammoniack draw a Tincture.

According to *Willis* two Drachms of the Powder may be given in Wine two hours before the Fit comes. The extract of it or of Gentian may be given in Pills on the Intermitting days.

I know not what makes Physicians fear a Hectick Fever so much from the use of Jesuits Powder; since a Hectick comes from a Blood or Nutritious Juice, grown too slowre, and unfit for assimilation to the Parts, and therefore requires Medicines to correct an Acid. You need not therefore fear it. But if you be overcome with Prejudice, you may be often giving of Gentian root in lesser Centaury Water before the Fit, and now and then interpose the use of volatil Spirit of *Sal Ammoniack*, which I have found excellent in a Quartan. In a contumacious Quartan the following Powder will do good.

Take of Salt of Wormwood, *Arcanum duplicatum*, Crabs-Eyes prepared, volatil Salt of Harts-horn, Amber each six Grains, *Laudanum Opiatum* three Grains. Mix them for three doses.

Or according to *Sylvius* his way, this or the like Mixture may be given to incide the Viscidity.

Take of Water of Fenil, Fumitory each one Ounce, Tincture of Cinnamon two Drachms, Oyl of Cloves two Drops, Spirit of *Sal Ammoniack* twelve Drops, Syrup of *Carduus benedictus* fix Drachms. Mix them.

One Spoonful of Spirit of Wheat, with a little Oyl Olive is commended as a present Remedy for a Quartan Ague: Because Oily things imbibe an Acid.

All Martial Absorbents are good to check the preternatural Acidity of the Chyle. Natural or Artificial Spaw Waters are good, and Spirit of Vitriol of *Mars* may be dropt into ones usual Drink. Several commend a Martial Vomit, and they say, that *Riverius* his Antiquartan was made of Antimony and Mercury. All Antimonials and Saturnines, both Minerals, Animals, and Vegetables are good. An excellent and pure Antiquartan may be made of a certain Martial Earth. I have had good Success from this following;

Take of Cerufs one Drachm, Bole Armenick one Scruple, Oyl of Cloves ten Drops. Mix them. Make a Powder. Divide it into four Doses. Give one before the Fit in some convenient vehicle.

Take crude Antimony and Salt of Tartar each a like Quantity. Make them run in a Crucible, let the Mass grow cold. You may safely give a Scruple of the Powder.

All things with Myrrh in them are

are good here, which *Matthiolus* knew, who commends a Drachm of Myrrh in Wine of Crete, given three times an hour before the Fit, and the Patient must then sweat in Bed. He writes how he cured himself, by this Medicine. *Comment. in lib. prim. Dioscoridis, cap. 67.* Here is a Receipt;

Take of Myrrh half a Drachm, Extract of Wormwood, Gentian, lesser Centaury, Treacle, *Carduus benedictus* each one Scruple, Oyl of Cloves four Drops. With a sufficient Quantity of Essence of Wormwood make Pills of a Grain weight. Give a Scruple. or half a Drachm for a Dose.

Our Antiquartanary Tincture has been the only Relief several could find; which I shall communicate to the Curious, because of its Excellent Virtues;

Take of Extract of Jesuits Powder, Gentian, lesser Centaury *Carduus benedictus*, Treacle each one Drachm. Pour to them Spirit of Tartar well freed from its Water, and Spirit of Sal Ammoniack. Make a Tincture. The Dose is from Thirty to Forty Drops every Day; but especially before the Fit.

All Absorbents which were mentioned in the Chapter of Fevers may be here made use of. Aluminous Medicines sometimes do the whole Business: for Instance;

Take of burnt Alum one Scruple or half a Drachm, Nutmeg half a Scruple. Mix, and give it before the Fit.

Volatil Spirits are good in Quartan Agues, especially combined with an Opiate. So are fixt Mercurials.

We recommend likewise the Tincture of *Lapis Lazuli* drawn with the urinous Spirit of Sal Ammoniack.

Tincture of *Saturn* with Tartarificate Spirit of Wine, or *Arcanum Tartari solut.* is of great use in a Quartan.

Without doubt all Diureticks and Sudorificks are good here, as in all Fevers and Agues.

Out of the Fit all such things are proper, as restore Spirits to the Blood; remove Acidity from the first ways, and drive it into the Blood, and such as dilute, Whey, &c. *Crato* commends a Decoction of Turnips for a Specifick. Hither belong opening Infusions of Splenetick Medicines and Mars.

Tempering Absorbents, especially Martial ones, as was said, must here be made use of, such as *Pulvis cachecticus Quercetani*, *Tinctura Martis*, *Arcanum Tartari*, *Elixir Febrile Spiritu Salis Ammoniaci paratum*, *Chyus Antimonii Salinus*, *Tinctura Antimonii Tartarifata*, *Elixir Album Helmontii*, Sal Ammoniack mixt with Salt of Tartar is excellent good: for an Antiquartan Spirit may be distilled of them.

Five grains of *Aurum fulminans* given in this Ague is a Secret.

For corroborating the *Viscera* and the Strength, and for the better Amendment of the peccant Acidity, mixtures must be made use of, made of temperate Cordial Waters, Pearl, Crabs Eyes, *antibellium Poterii*, Coral, Mother of Pearl, and such like Preparations, that imbibe an Acid, being added in due proportion, for taste sake adding a little *Saccharum perlatum* or *rosatum*. Here is a Receipt;

Take of *Aqua confortativa* three Ounces, Water of Cinnamon half an Ounce, *Scordium* one Ounce and an half, prepared Pearl (but for the Poor, prepared Crabs-Eyes or Harts horn) one Drachm, Sugar of Pearl, as much as will make it grateful.

For which end, divers Electuaries, Conerves, Preserves, &c. may be made. For when a Quartan is gone we must not then presently leave off Medicines; but we must insit upon Martial, bitter, and other aperient, diuretick, saline, antiscorbutick and splenetick Medicines. Spaw Waters will be good. So Whey drunk for a time with juice of Fumitory and Brook-lime is a generous Remedy.

It were tedious to mention all Medicines which might do good: We shall therefore proceed to Externals. Nettle Roots, according to *Crato*, applied to the Wrists, do good. He also commends an Epithem of Spirit of Wine, applied to the Stomach.

Amulets, according to the received Custom among the People,

some of them are more superstitious than wholsom, others are not so superstitious but more wholeston.

Trallianus hangs a live Beetle tied fast in a yellow linen Cloth, about the Neck.

He commends also a green Lizard, the Nails of the Patient, and the Hairs of a Goats Beard.

Platerus above others commends some Amulets as certain, namely, a Spider hung about the Neck in a Hazel Nut, to wear a Jasper or Snail Stone, or to hold a Mole in ones hand till it dyes.

Rondeletius orders Leaves of Sage, Elder, Doves-foot, Rue, each half a handful, Marigold one Pugil, bruised with a little Salt and Wine, to be tied to the Wrists, before the Fit, when Signs of Coction appear.

Some affirm, that after boyling of an Egg for some hours in a Quartanary Person's Urine, then pricking it full of holes, and putting it in an Ants hill, the Ague ceases.

Crato Epist. med. Scholæ. 113. relates this following Passage. *Simon* the Baker's Son had been ill three years of a Quartan; and he told me, he had used several Remedies, but this only did him good. He took *Aqua Vita*, and wet a Tench first, and applied it to his Stomach, when the Quartan was coming. A Tench is split in the middle, and applied to the Soles of the Feet in Agues, as an excellent Remedy. And *Quercetan* applies the same to the Wrists. Several

Several cry up for a certain Experiment three Roots of Plantain, gathered before Sun-Rising and hung in a Bag about the Neck.

Sometimes People are desperate and run to Charms. But it is extream dangerous; and there want not Instances of Quartans, cured by Witch-crait, which have proved Fatal.

These and other Amulets always frustrated my Expectation. Yet according to *Willis* his Opinion, divers things may to good purpose be applied to the Wrists, and those are Astringents, which I have mentioned before, and therefore need not now repeat. But before I proceed any further, I must take notice of one thing, That when I had tried the above-said Amulets in my self to no purpose, one of nine sorts of Herbs with *Panis Judaicus* and Salt did me good. But I am still doubtful to what I should ascribe the Effect, since at the same time I used other Remedies, but no Fit came, when I hung this Amulet about my Neck. It answered my end twice in others; but in others it failed. Divers topical Medicines, Plasters, and Oyntments, may be outwardly applied to the Stomach, *Hypochondria* and Spleen, to wit Oyl of Scorpions, Tartar rectified, *Emplastrum de Cicuta*, *de Hyascyamo*, and *Magneticum*. The Back may be anointed with *Balsamus Mynsichti*. A pickled Herring split in the middle may be ap-

plied to the Back, or the Loyns may be rubbed with Garlick,

Ferrara in Observat. Chirurg. Observ. 49. wonderfully commends this following, where-with the whole Chine must be anointed, beginning at the Nape of the Neck, and proceeding to the *Os Sacrum*.

Take of Oyl of Bays, Fox, de *Euphorb.* Spike, Nutmeg, Turpentine each two Drachms.

These things premised we will see what empirical Specificks there are. Some magnifie a Decoction of Clubmoss; others of Broom.

Some commend the Root of Mullein. *Cardan* commends the Juice.

A Drachm of Master-wort root powdered, and given in a Draught of Wine, before the Fit, and several times repeated, does not only mitigate the Fit, but often takes it quite off.

The Heart of a Hare was formerly tried by *Diomedes Cornarius*, approved by *Monavius* and *Andreas Hildebrandus*, and is still commended by others as a Specifick in a Quartan. It is believed to do good, hung about the Neck.

The Hoof of a Seal, or its Heart; worn on the Arm, or about the Neck is thought to cure a Quartan.

Oyl of Scorpions applied to the Back an hour before the Fit, stops it.

A Drachm of *Castor* taken in the Fit, is said to cure Quartans.

If you hang the Heart of a Salamander about the Aguish Persons Neck, they say, it will cure a Quartan presently.

Some say, that Spiders Eggs,

tied in a black Cloth, and applied to the left Arm, cure a Quartan; and so do four of them drunk.

The Liver of a Dolphin roasted and eaten, they say, cures a Tertian and Quartan. But who is able to count all such things, since every one imagines he has a Secret for a Quartan Ague?

CHAP.

C H A P. X.

Of Symptomack Fevers and Agues.

§. I.

WHereas divers Symptoms attend these Fevers and Agues, which we have been treating of, the famous *Sylvius* has given the Fevers and Agues their Names from the most urgent Symptom.

They are either *Chill*, *Burning*, *Epialæ*, *Fastidious* or *Asslodes*, *Thirsty*, *Hungry*, *Cardiack*, *Gripping*, *Swooning*, *Choaking*, *Asthmatick*, *Coughing*, *Arthritick*, *Mad*, *Emetick*, *Cacatory* or *Cathartick*, *Sweating* or *E-lodes*, *Pissing*, *Spitting*, or *Odon-talgick*.

That Fever or Ague is called *Chill*, wherein no Heat is observed, but only troublesome Cold, arising from a sharp, viscid Acid, vellicating the Membranes and Fibres.

That is called *Burning*, in which no Cold, but only a little Shivering precedes, and a most violent Heat follows, arising from sharp, sulphureous Particles.

In an *Epialæ*, both Cold and Heat appear in a violent Degree.

The *Thirsty* is so called from

the violent, unquenchable *Thirst*; as the *Hungry* is from insatiable Hunger, even in the time of the Fit. The *Fastidious* from the Loss of Appetite. The *Cardiack*, from the unspeakable Pain, or Heart-burn about the mouth of the Stomach.

The *Gripping* is so called from the Colick, that attends it, arising generally from a Disturbance in the Blood, and an acid Raging about the Nervous parts of the Mesentery, and rending and tearing the Fibres.

The *Swooning* is so called from Swooning, which is caused by a great Disturbance in the Blood, and other Causes, which shall be hereafter mentioned.

The *Choaking* Fever is so called from the urgent Symptom, when a Man seems to be choaked by an austere Juice, carried to the *Oesophagus*, *Trachea*, or Lungs. It is called *Asthmatick*, when usually viscid Phlegm oppresses the Stomach.

A *Coughing* Fever is attended by a Cough, which is caused usually by the Acrimony of the Fever.

Arthritick Fevers have a violent Pain in all the Limbs and Joints

Joynts attending them.

A *Mad Fever* is attended by a *Delirium*, which is caused by the disturbed Mixture of the Blood, and a Disturbance in the animal Spirits ensuing thereon.

It is called an *Emerick Fever* wherein there are enormous Vomiting produced generally by a *Spasmodick Contraction* of the Stomach.

A *Cacatory Fever* is attended with a Looseness, caused by a volatil and over sharp Bile.

A *Sweating Fever* is called *Eloides* or *Masly*: because Patients perpetually swim in Sweat. Some call it *Causus Spurius*, or the *Sweating Sickness*. It was Endemick in England. Some call it *Febris Colligativa*.

A *Pissing Fever* is attended by a *Diabetes*.

A *Spitting Fever* has a great Salivation attending it. Some call it *Salivary*. It comes from disaffected Glands.

An *Odontalgick Fever* is attended by the Tooth-ach.

§. 2. *Part affected.*

WE need not say much of the Part affected because the very Denomination designates the Part affected.

§. 3. *Diagnostick.*

SINCE these Fevers may easily be known by the concomitant and urgent Symptom, it would not be worth the while to say any more of the Diagnosticks.

§. 4. *Cause.*

THEN we know a thing, says *Aristotle*, when we know its Cause, wherefore that we may come to the exact knowledge of Symptomack Fevers, we will search their Causes.

Cause of a Chill Fever.

THE Ancients reckoned the Cause of a Chill Fever to be tough and cold Phlegm. *Spiritus* will have it to be, the Pancreatick Juice, with abundance of viscid Phlegm, the Bile being Chill. *Helmont* says, That only the *Archeus* is the efficient Cause of Cold. But we say, That in these Fevers there are sharp and viscid Particles, which by sticking fast to the Membranes and Fibres all over the Body, and vellicating them with their Acrimony, cause Cold and Shivering, as the Soul judges; because it never observed such a Motion proceed from any thing but from Cold.

§. 5. *Cause of a Burning Fever.*

THE old Gentils thought Bile and inflamed Blood was the Cause of a burning Fever. The *Chymists* and *Antients* think it is, sulphureous Particles that kindle the Blood. But according to *Sylvius* the Cause is a Pancreatick Juice not sharp, little Phlegm and not viscid, but abundance of sharp, oily Bile. We reckon the Proximate Cause of

of this Disease to be the hottest Particles of the Blood, abounding with inflammable Bile, and volatil Salt, which cause such a violent Heat: Nor do we exclude here the furious Influx of animal Spirits into the Parts.

§. 6. Cause of an Epiala.

THE *Galenists* make the Cause of an *Epiala*, wherein Patients are violently hot, and violently cold at the same time, to be sometimes Phlegm and sometimes Bile; for from putrid Phlegm and Bile they derive Heat; and from imputrid Phlegm excessive Cold. *Æt. v. us* blames the Pancreatick Juice and sharp Bile, so that the Heat of the one concurs with the Cold of the other. But we think that in such a Fever (if there be any such) there are unequal Dispositions of the Blood and of the febrile Ferment, enclosing sometimes to one part, sometimes to another, as when the febrile, hot Particles are carried to the Habit of the Body, Heat is produced there; but if they are otherwise figured and proportioned, they seem to produce Cold. For often there is a Fallacy in the Sense, because the Patients use to feel cold, though the Fermentation is high, the Pulse vehement and great, and the Body feels cold to the very touch: And these things happen only from the Acrimony that vellicates, sometimes these, sometimes the other Fibres and pro-

duces a Sense, sometimes of Heat, sometimes of Cold. So likewise these sharp Particles get predominance in the Stomach, and cause an *Affodes*, or Vomiting Fever. These Particles also often get into the Folds of the Stomach and by corrugating it, and spasmodically contracting the Fibres of the gall Bladder, marr its Juice, by pouring out the Bile; whereupon they are taken with a Vomiting Condition. And this Vellication proceeds from a perverse Motion of the animal Spirits, which being Disordered are apt to cause Convulsions. So *Æt. v. us* says, That in this Fever volatil and sharp Bile rises to the Stomach, and thereby causes Vomiting. *Swiss* thinks this cruel Vomiting is caused, when Fermentative Seeds, being put in Motion, are discharged by the Arteries, that open into the Coats of the Stomach, at every appulse of Blood, and cause Vomiting; just as if one had swallowed Particles of *Stibium*.

§. 7. Cause of Thirsty Fevers.

THE old *Galenists* blame Bile and its Vapors, which rise to the Throat, and cause driness there, as the Cause of Thirsty Fevers. *Helmont* holds, that Thirst does not arise from Heat in the Mouth of the Stomach, but rather from an Excrement, which disaffects the Sensory. *Swiss* thinks, that sulphureous Particles are carried to the Throat. *Wæ* hold, that in these Thirsty Fevers, many Saline Corpuscles are carried to

to the Throat and beset its Coats, so that all Passage and Intercourse of Vapors, designed by provident Nature to moisten the Nerves of the Throat, is stopt: and hence an unquenchable Thirst must of necessity follow.

§. 8. *Cause of Hungry Fevers.*

HELMONT says, the Cause of Hungry Fevers proceeds from the Spleen. SYLBIUS blames the Pancreatick Juice, grown sowre, by Reason of its Stagnation. We derive Hunger from any preternatural Acid, which kindly affects the Fibres of the Nerves in the Mouth of the Stomach.

§. 9. *Cause of a Fever with the Heart-burn.*

THE Galenists lay the Blame of a Cardiacal Fever upon the four Humors; but especially upon vitious Bile, carried to the Mouth of the Stomach. With HELMONT corrosive Salts, which fret the Stomach, are the Cause. With SYLBIUS it is the Pancreatick juice, grown sowre by Stagnation, especially if sharp Bile do concur. We also do blame in this Case, sharp, saline Particles, discharged by the Mass of Blood, or Lymphatick Vessels upon the Orifice of the Stomach, which there pierce and rend the Fibres and so cause the Heart-burn.

§. 10. *Cause of the griping Fever.*

THE Galenists, after their usual way, derive the Cause of a griping Fever from the four Humors, separated upon some Occasion or other in the Guts; or from Wind that distends the Guts and the Belly. HELMONT says it proceeds from an Acid. SYLBIUS says, the Cause is the Pancreatick Juice, being too sowre or austere; or Wind. SWILLIS thinks, that neither yellow nor green Choler is the Cause, but that the Nervous Liquor is in fault, which sticks in the Mesentery and its Folds, ferments there, and causes Gripes and Torture; and Convulsions in several Membranous parts, or Pains all over. We reckon these Colical Fevers arise, when a Foreign Acid, bred by the disturbed Mixture of the Blood, forsaking the Mass of Blood, is poured into the Membranous Sensible parts of the Mesentery, and by Stagnation becomes as it were corrosive, so frets the Fibres and causes convulsions in the Guts, and sometimes continues them to other Parts.

§. 11. *Cause of a Swooning Fever.*

THE old Galenists say, the Cause of a Swooning Fever is Defect of animal Spirits, arising from a various Disposition of Humors. HELMONT thinks, it is some narcotick, disperseive Poi-
son

son that raises a *Syncope* in the upper Orifice of the Stomach, and takes away Sense and Motion. *Willis* makes the Cause to lie in a vapid and dead Mass of Blood. According to him also such Fevers may arise, when the Blood ferments too much, and when it's Sulphureous Particles are too much dissolved. So the Stoppage of the Influx of Animal Spirits may produce one of these Fevers. According to *Sylvius* the Cause is the Pancreatick Juice, that has acquired an Acidity more volatile than sharp, which coagulates the Blood. The *Cartesians* derive it from the Extinction of the vital Flame for a time. It is *Our* Opinion, that besides the disturbed Mixtion of the Blood, the Blood does either stagnate in the Heart or at least is coagulated, whereupon its Motion ceases for a time. And this may be caused by divers Acids, some way or other got into the Blood. Nor do we exclude the Influx of the animal Spirits to the Heart, being either stopt or diminished. So if there be a Swooning without a grossness of Blood, it argues the *Æthereal* Matter then introduced into the Blood, is quite different from the *Æthereal* Matter which is ordinarily mixt with it. And oftentimes a gross acid Phlegm lies about the mouth of the Stomach, and causes Nauseousness, Heart-burn, and sometimes Swooning, which must be distinguished from a true Swooning: for in the former case, the Spirits are only oppressed, and all the Symptoms may be removed by one Vomit; but in a true Swooning the Patient must be recovered by Cordials.

§. 12. Cause of choaking Fevers.

THE *Ancients* derive Choaking Fevers from gross Phlegm, besetting the *Bronchia*, and sticking in the first Ways. *Sylvius* blames austere Vapors rising to the Gullet, Heart, and Lungs, and Wind. *We* think, if there be an Oppression at the Heart, it is a Sign the Stomach is beset with thick Phlegm; or that its Membranes are clogg'd with it. Nor do we exclude austere Vapors rising to the Throat.

§. 13. Cause of Asthmatick Fevers.

THE *Ancients* say, the Cause of an Asthmatick Fever is thick Phlegm, lodged in the passages of the *Aspera Arteria* and the *Bronchia* of the Lungs, which is sometimes translated thither. *Paracelsus* seems of that Opinion. But *Helmont* places it in the Stomach, and blames mucilaginous Matter gathered there. *Sylvius* will have the Cause to be a viscid Phlegm dissolved by the Pancreatick Juice, and carried to the Lungs. *We* do not question, but many viscid Excrements are bred by the disturbed Mixtion of the Blood, and its cacochemical Dispositions, which are carried to the Lungs or their *Bronchia*, or to the Stomach, and there cause an *Asthma*. So an Acid, by coagulating the Blood in the Pneumonick Vessels, and stopping

stopping its Circulation, may hinder Breathing. And so may a Disorder in the animal Spirits.

§. 14. *Cause of a Coughing Fever.*

THE Galenists say, the Cause of Coughing Fevers is, Vapors dissolved by the Febrile Heat which ascend to the Lungs, or condensed Vapors dissolve, and fall from the Head upon the Lungs, and raise a violent cough there. *Paracelsus* holds, that a cough proceeds from Tartar, or a dissolved mucilage in Fevers. So *Wilmont* makes it to come from a salt Excrement separated by Fevers. According to *Soranus*, a Cough is an Irritation of the Nerves or Fibres of the Lungs by any thing Heterogeneous. *Sylvius* makes the Cause to be, sharp Exhalations and Vapors carried to the Lungs, and provoking them to cough. *Cassius* blames sharp Particles coming from the Mass of Blood, which vellicate the *Aspera Arteria* and Lungs, and so cause a Cough. We think, the Cause of this Fever is foreign Salts, or sharp viscid Humors, which hang about, vellicate and rend the Tracheal Fibres; yea sometimes make them convulse, and so raise a Cough. So its seat may sometimes be about the Spleen, in the *Intestinum duodenum*, yea in the Stomach, where the viscid Matter that is separated, may lodge. A Cough may likewise arise from a *Scorbutick* Blood, which irritates the Lungs and Tracheal Fibres.

§. 15. *Cause of Arthritick Fevers.*

THE Galenists say, the Cause of Arthritick Fevers is the Desflux of a bilious Humor upon the Joynts. *Paracelsus* blames Tartar, *Wilmont* questions not but this Fever has its Rise from a Febrile Acid, which infects the *Archeus*. *Soranus* holds, that this Pain proceeds from the mutual Fermentation of two Humors. *Sylvius* blames the Pancreatick Juice, which is so corrupt, that it is troublesome to the Joynts: For if this Juice have Acrimony in it, it will carry the Bile along with it, and cause violent Pain; but if it be not altogether so sharp, it carries Phlegm, and causes an oedematous Swelling. The *Cassians* blame Scabrous, Saline Particles, discharged by the Mass of Blood upon the Joynts. *Sorani* lay the Fault on any lixivial Fæculences, which are apt to corrode the Membranous and Nervous parts, the Ligaments, or the *Periosteum*; which Fæculences are, at the time of the Fever fit, precipitated to the Joynts, and there produce a throbbing or gnawing Pain.

§. 16. *Cause of a Mad Fever.*

THE Galenists make the Cause of a Mad Fever to be, Blood abounding and poured into the Brain, sometimes enrag'd Bile, causing a great inflammation, and sometimes adust Bile. *Paracelsus* thinks,

thinks, this Fever arises from the Oppilation of the Spirit of Life. *Boerhaave* thinks a Febrile Drofs seizes the *Præcordia*, and being of the Nature of Poyson, tyrannizes there, and causes Mad Fevers. *Boerhaave* says, these delirious Fevers are produced by the Confusion and Irritation of the Animal Spirits. According to *Boerhaave* the Cause is, a sharp Bile, made sharper upon meeting with the Pancreatick Juice, whereby vitious Animal Spirits are produced, which move turbulently, and must of necessity cause Madness. We think, it is sharp Particles, arising from a great Perturbation of Blood which get into the Brain and cause Deliriousness.

§. 17. Cause of a Fever with a Loosness.

THE *Salmuts* in a Fever with a Loosness blame bad, corrupt Humors, especially Bilious which stimulate the Guts to expulsion. *Paracelsus* blames a dissolved salt, which by its Acrimony irritates the Stomach, but especially the guts. *Boerhaave* blames indigestion. *Boerhaave* thinks, that all sharp, serous, and bilious Humors, do often suffer a Flux in the Mass of Blood, and so are evacuated by the Guts, and cause a Loosness. *Boerhaave* here blames the bile as not volatil enough, and made over sharp upon its meeting with the Pancreatick Juice. The *Cartesians* hold, that in these Fevers great store of Humors in the Blood are precipitated towards the Guts, which by their irrita-

tion and vellication cause a Flux. And we are of the same Opinion.

§. 18. Cause of a Sweating Fever.

THE Cause of a Sweating Fever, according to the Ancients, is a Fusion and Colliquation of the Humors. According to *Boerhaave* it is a Pancreatick Juice more volatil than sharp. According to *Boerhaave* the Cause of this Disease consists in a Dyscrasy and Debility of Blood, inasmuch namely as its Liquor, like sowre Milk, is continually apt to run to Whey, and then its own Serosity, and any other Humors that are mixt therewithal, since they cannot be assimilated, are presently voided; and because the Pores of the Skin are very open, they are discharged rather by Sweat than any other Way. And the Reason why the Blood is so disposed to Fusion, lies in the Predominance of a fluid Salt, or an Acid in its Mass, and sometimes in a degenerate nervous Juice. Our Cause is, an over-high Circulation and Fermentation of the Blood, which, as it were, melt the Blood. Urine and Sweat agree in several Regards. The Suppression of the one encreases the Discharge of the other. Now the Reason why the Urine is stopt, is because the Nerves of the Reins are too much straitned, and hereupon their Fibres are corrugated, and the transcolatory Orifices are shut, which Spasm, when it abates, all is in due order again. But if these transcolatory Orifices be too open, either,

either, because abundance of *Serum* is separated from the Blood, and precipitated to the Kidneys; or because the Vessels, running through the *Omentum*, are too wide, so that potent Matter may pass that way to the Bladder, then a Diabetick Fever may easily be produced.

§. 19. Cause of Spitting Fevers.

THE Ancients in Spitting Fevers blame almost all Parts of the Body; but especially the Spleen. *Sylvius* says, the Cause is, a Pancreatick Juice, so corrupt, that it flows in abundance to the salival Glands. I do not at all doubt, but in these Spitting Fevers the Glands are affected. For we see in Children, that are troubled with Driveling, how hard the Glands are all about the Neck; therefore the salival Glands receive all the serous Superfluities; because the rest are obstructed, and cannot.

§. 20. Cause of a Fever with the Tooth-ach.

I Think, the Cause of an Odontalgick Fever is an Acid, sometimes very small in Quantity, which pricks, corrodes, and painfully irritates the nervous and fibrous Root of a Tooth. For in a short time not only that side of the Face and Temples; but the whole Head akes, a manifest Sign of the Spasm of the Fibres. Then arises an inflammatory or cedematous Swelling, with a copious Flux of limpid

Spittle, squeezed by the pertinacious Contraction of the nervous Fibres immediately out of the Glands, and mediately out of the Blood-Vessels.

§. 21. Prognostick and Cure.

AS to the Prognostick and Diet, they may easily be gathered from what has preceeded. We shall not therefore use tedious Repetitions but proceed to a succinct Cure; and first of all, of a Chill Fever.

§. 22. Cure of a Chill Fever.

THE *Galenists* say, that thick and tough Phlegm must be attenuated and cut; to this end they commend divers Purgers, Incisers Preparers, and especially aromatick and sharp things. *Sylvius* for the Acidity of the Pancreatick Juice, and for cutting of Phlegm, uses divers volatil Salts, and all manner of Aromaticks. To which purpose he commends the following, or some such Mixture;

Take of Water of Parsly two ounces, Fennil one ounce, *Aqua Theriacalis simplex*, or *Vine Matthioli* one Ounce and an half, volatil Salt of Amber one Scruple, Syrup of *Carduus benedictus* one Ounce, Oyl of Cloves three Drops. Mix them.

For the Author never hitherto could observe, that any thing laid

laid the Cold better, than Oyl of Cloves, which as long as the Cold lasts, may be given three or four times in an hour in some mixture. In this case he Questions not, but Opiates mixt with Oyl of Cloves, Would do good. *Ute* in all Agues and Fevers, where there is Heat and Cold, use to prescribe this following with good success.

Take of Treacle two Drachms, *Specificum Strobelbergers* half a Drachm, Oyl of Cloves two Drops. Mix them, make a *Bolus*.

For all volatils joyned with Opiates do the business. All manner of sharp Aromaticks will do good. So also in the beginning of the Cold fit, fixt Febrifuges may very well be mixt with Aromaticks. This is an excellent Medicine for the common sort in Agues.

Take of white or long Pepper nine Grains, Oyl of the same, or of Cloves two Drops. Mix, and give it in Wine.

If you mix a Grain or two of *theriaca celestis*, you will have an excellent remedy. While the Cold fit is upon one, distilled Oyl of Cloves, applied to the Epigastrick Region, gives ease, and abates the fit.

§. 23. Cure of a Burning Fever.

THE Galenists in burning Fevers, commend bleeding and all cooling remedies. *Sylvius*, to allay the Heat and concomitant

Symptoms, prescribes the following Apozem;

Take of Roots and Leaves of Sorel two handfuls, leaves of Strawberry, Violets each one handful. Boyl them in Barly Water. To ten ounces of the colature, add of *Syrupus acetosiratis citri*, three Ounces, *Spiritus salis dulcis* half a Scruple. Mix them.

Ute, to temper the Acrimony of the Bile, that is, to correct a volatil acid, more or less oylly in the Blood, recommend this following;

Take of Water of Sorel, Plantain, Wood-Sorel, Flowers of red Poppy each one ounce, *diascordium* one Drachm and an half, *Spiritus mirt dulcis*, or *Salis dulcis*, from half a Drachm to a whole, Syrup of Purslain three Drachms. Mix, and give it at several times.

Or we may give the following Julep;

Take of a Decoction of *Scorzoneræ* root one pound and an half, tincture of Roses one Ounce, of Daisie one Drachm, Syrup of red Roses three Drachms, Spirit of Vitriol, as much as will make it grateful.

When the Tongue and Mouth are dried and furred, the Mouth must be washed, and the throat gargled with the following mixture; or it may be held warm in the Mouth;

Take of Water of Houfleeck, Self-Heal each eight Ounces, fresh Juice

Juice of River Crabs four Ounces,
Sal Ammoniack purified one
Drachm and an half. Mix them.

§. 24. Cure of an Epiala.

IN Fevers, called *Epiala*, Medicines made up of the aforesaid contraries will be proper. To which end *Sylvius* commends the following mixture;

Take the Water of *Cardius benedictus*, Cichory each one Ounce and an half, simple Treacle Water six Drachms, destilled Vinegar six Drachms, Crabs Eyes Powdered half a Drachm, Syrup of the five opening roots one Ounce. Mix them.

This following may also be given;

Take of Water of Borrage, Bugloss, Raspberry each one Ounce and an half, Crabs Eyes, Coral prepared each half a Drachm, Sugar of pearl, what will make it grateful. Mix, and give it by spoonfuls.

§. 25. Cure of Thirsty Fevers.

THE Ancients used to prescribe several Juleps, for quenching the thirst. They also commend all Watry and Cooling things, of which the number is infinite. *Sylvius* commends this following;

Take of Barly Water twenty Ounces, Syrup of Purslain two Ounces, *acetositaris citri* one Ounce, *Spiritus salis dulcis* half a Drachm. Mix them.

For a parched and dry Tongue, he commends mucilage of Quince Seeds, and *Psyllium*. In excessive thirst and heat the following, or some such like mixture will be proper;

Take of Spring Water two Pounds, Cinnamon Water half an Ounce, fresh Juice of Citron one Ounce and an half, Syrup of Raspberry, which is sufficient to make it grateful. Mix them.

Lapis prunelle, taken in Whey, quenches thirst well. All Tart and Watry things may be here made use of. So the Mouth may be washed with Water, and a little Vinegar or Wine added to it.

§. 26. Cure of a Hungry Fever.

TO stay Hunger, which threatens fainting, all things will be good, which powerfully infringe and concentrate an acid; such as Crabs Eyes, Pearl, Coral, Chalk, &c. powdered, and about fifteen Grains put in some convenient mixture or vehicle. If you put some Oyl of Tartar *per deliquium* among other things, you will certainly cure it.

§. 27. Cure of a Fever with the Heart burn.

IN Cardiacal Fevers the *Galennists* commend divers Stomachicks, Cordials, &c. which have been mentioned before. *Sylvius* in these Cardiacal Fevers commends Opiates. ~~etc~~ when we have any suspicion

fuspicion of a viscid, acid, sharp or bilious matter, that offends either in some Poysonous, corrosive or viscid Quality, and hangs about the upper Orifice of the Stomach, do commend antimonial Vomits, while the strength is good; but if the patient have lost it, we fly to *Diaphoreticks*, joyned with *Opiates*, as to our last refuge, which do the whole business in Fevers and Inflammations, and imbibe an acid. So this intention is answered by these *volatils*; *tinctura bezoartica*, *mixture simplex*, *Spiritus theriacalis campboratus*, Spirit of Hartshorn, and by these fix Medicines, *antimonium diaphoreticum*, *aureum fulminans*, corrected and mixt with Ivory, *bezoarticum minerale*, and Hartshorn philosophically prepared. In this case also *essentia carminativa*, mixt with *essentia anodyna* and *castorei*, will be of great efficacy. All Cinnabarines mixt with Precipitants are proper here. The following Powder will be very useful;

Take of *pulvis bezoarticus* one Drachm prepared shells, Cinnabar of Antimony each one Scruple, Castor half a Scruple, *laudanum Opiatum* two Grains, Oyl of Cinnamon, Mint each one Drop. Mix them. Make a Powder.

And divers Paregoricks may be applied; as bags of Paregorick, and Carminative Herbs, Mint, Wormwood, wild Thyme, Chamomil Flowers, and Tops of Dill. Also divers Unguents may be made of Aromatics; especially a Plaster may be applied of Gum *tacamahaca* and *caranna* with balsam of *Peru*.

§. 28. Cure of the Gripping Fever.

What Medicines the *Galienus* use in these Fevers, has been mentioned in the Chapter of the Colick, where you may see what several Authors use. *Galienus* in Gripping Fevers, among other things, commends the following mixture;

Take of Water of Mint, Fenil, Parsley, Scurvy-Grass each one Ounce, Spirit of Nitre ten Drops, *laudanum Opiatum* three Grains, Spirit of Sal Ammoniack one Scruple, Oyl of Aniseed six Drops, Syrup of Fenil one Ounce and an half. Mix them.

In Our Opinion all Cinnabarines, Anodynes, and Castorines, are good in Gripping Fevers; because they perform every tittle of the Cure: for they are Antispasmodick, and also respect an acid: for instance;

Take of *tinctura bezoartica* one Drachm, *Spiritus salis Ammoniaci castoreatus* half a Drachm, *essentia Anodyna* one Drachm and an half. Mix them. Give it to forty Drops.

To this end also *cephalicum Michaelis*, *liquor cornu cervi succinatus*, *nervinus*, and our *elixir polychrestum*, made of our Alkaline, are proper; all which things do temper an acid, and allwage the membranous Parts, and sensible Fibres. *Opiates* may also be joyned with Precipitants. Therefore this absorbent Powder will be excellent.

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Take

Take of *pulvis absorbens Wedelij* one Drachm, *bezoarticum Joviale*, Cinnabar of Antimony each one Scruple, prepared Castor half a Scruple, *laudanum opiatum* one Grain. Mix them. Make a Powder.

I think also Powder of Crabs Eyes, Pearl, *sperma ceti*, and a little Castor are admirable good, because they imbibe the vitious Acid, as do all Alkalines, but especially mixt with Opiates. Externally divers Topicks are good, which you may find in the *Colick*.

§. 29. Cure of a Swooning Fever.

IN Swooning Fevers the Galenists commend divers spirituous and comfortable things, whose number is infinite. *Sylvius* to prevent Swooning commends the following mixture;

Take of Water of Mint two Ounces, *Aqua vite Matthioli* one Ounce, or Tincture of Cinnamon half an Ounce, Oyl of Cloves six Drops, Syrup of Sturvy Grafs one Ounce. Mix them.

We in these Swooning Fevers, the Palpitation of the Heart and Fainting, do use the following mixture, and other moderate Cordials, such as Water of Borrage, *Scordium*, Citron, Treacle, mixt with Syrup of Citron, Baum, and of the stronger sort, Gascoin's Powder, Bezoar, *confectio de hyacintho*, Venice Treacle, &c.

Take of Water of Borrage, *Scordium*, Black-Cherries each two Ounces, Cinnamon with Bugloss one Ounce, prepared Pearl one Drachm, Sugar Candy what is sufficient. Mix them.

Or in these Fevers you may mix Martial Antiscorbuticks, and other Absorbents: for instance;

Take of *species cordiales temperatae* one Drachm, *pulvis absorbens* one Drachm and an half, Pearl one Drachm, Oyl of Cinnamon five Drops. Mix them. Make a fine Powder. The Dose is from half a Scruple to a Scruple in a proper vehicle.

The following Mixture will not be improper, to refresh and comfort the Spirits;

Take of Water of Borrage, Roses, Black-Cherries, Cinnamon each one Ounce, Juice of *Kermes* three Drachms, Musk (for such as can bear it) one Grain, Cinnabar Native, or of Antimony twenty Grains, Civet, *laudanum opiatum* each one Grain, Syrup of Coral one Ounce. Mix them. Give it by spoonfuls.

So externally divers Cataplasms and Balsams may be applied to the Heart and Nostrils.

§. 30. Cure

§. 30. Cure of Asthmatick Fevers.

WHat Medicines the *Salerniti*s use in Asthmatick, and short-winded Agues, may be seen in the *Chapter of the Asthma*. For they commend divers Phlegmagogues and Incisers. *Ulc* in these Diseases recommend divers Pectoral, Balsamick, Sulphurated, and Myrrhated Medicines, mixt with Aperient, Martial ones, which have a Nitrous, Balsamick Salt in them, and Diureticks: this following will do the business;

Take of *Magisterium Saturni*, Crab's Eyes, each one Drachm, Cinnabar of Antimony, Flowers of Sulphur each one Scruple, Flowers of *Benzoin*, half a Scruple, *laudanum opiatum* two Grains, Oyl of *Aniseeds*, two Drops. Mix them. Make a Powder.

So divers Vomits will be proper, especially where any viscid Phlegm is in the Stomach; of which we have spoken before.

§. 31. Cure of a Coughing Fever.

IN Coughing Fevers, *Sylbius* commends divers Opiates, mixt with Volatil and Oily Salts. For which purpose he extols the following mixture;

Take of Water of Mint three Ounces, *Spiritus carminativus Sylvi* one Ounce, *Ammoniack*

twenty Drops, *laudanum opiatum* three Grains, Syrup of Fenil one Ounce and an half.

In Imitation whereof, I use this following;

Take of Water of Mint two Ounces, Citron rind one Ounce, Spirit of Sal Ammoniack twenty Drops, Salt of Wormwood half a Scruple, Oyl of Mint two Drops, Syrup of Mint six Drachms. Take a spoonful at a time, and as there shall be occasion; add a Grain of *laudanum opiatum*, or *theriaca celestis*.

In a moist Cough this following will be convenient;

Take of Sulphur myrrhatum two Scruples, root of *Florentine Iris*, *antimonium diaphoreticum*, each one Scruple, Crabs Eyes, Cinnabar of Antimony each half a Scruple, *theriaca celestis* six Grains. Mix them. Make a Powder. The Dose from half a Scruple to a whole one.

§. 32. Cure of an Arthritick Fever.

IN Arthritick Fevers this following will be proper;

Take of *Acanum duplicatum Mysiceti*, *antimonium diaphoreticum*, Cinnabar of Antimony each half a Scruple, *laudanum opiatum* two Grains. Mix them, for two Doses. Or,

Take of *Bezoarticum Minerale* fifteen Grains, Native Cinnabar
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fix Grains, *laudanum opiatum* one Grain. Mix them.

And a Decoction may be made of Worms in Wine or Whey. And here all Opiates, and all Balsamicks will be proper, especially such as are taken from Wine. Several things may be applyed externally, which you may see in the *Chapter of the Gout*.

§. 33. Cure of a Mad Fever.

Sylbius Cures Mad Fevers by such things as correct and temper the Acrimony of the Bile; such as are Oily things especially, Emulsions and Opiates used inwardly, or applyed any way to the Head outwardly. In these Mad Fevers Vomits are given with good Success, while the strength is good. I highly value all Martial Aperients, Volatil, Cephalick Salts, Cinnabarines mixt with *arcantum duplicatum*, Camphore, Sugar, and Magistery of Saturn, adding (if there be occasion) some *laudanum opiatum*, or *theriaca celestis*.

§. 34. Cure of a Vomiting Fever.

IN Vomiting Fevers Sylbius advises all things which fix Bile, such as are Auster things and Opiates. But use to give *tinctura bezoartica* mixt with *essentia Anodyna*, or *essentia theriacalis* may be given with half as much of Essence of Opium, about forty Drops at a time. Also all Cinnabarines are good, mixt with Cream of Tartar,

Crabs Eyes, *terra Catechu*, root of *Aron*, a few Drops of Oyl of Cinnamon, Mint, Mace, &c. In this case all things made of Treacle, used either inwardly or outwardly will be proper. I have often with very good success given a Drachm of new Treacle. The following mixture is excellent;

Take of Water of Mint, Raspberry each one ounce and an half, Cinnamon one Ounce, *Spiritus theriacalis camphoratus* three Drachms, *laudanum opiatum* two Grains, essence of Amber half a Scruple, Syrup of Mint six Drachms. Mix them.

Outwardly bags of Paregorick Herbs may be applyed to the Stomach: for instance;

Take of the leaves of Mint two handfuls, Nutmeg half an Ounce, Cinnamon, Mace each one Drachm, quilt it with Cotton in a round piece of Silk; besprinkle it plentifully with *Spiritus vini theriacalis*, or with Oyl of Mint and Juniper.

Or the following Plaster;

Take of new Treacle half an Ounce, balsam of Peru half a Drachm. Or,

Take of sowre Leven five Ounces, Powder of Mint one Ounce, Zedoary six Drachms, three Nutmegs, Mace, Cinnamon each one Drachm and an half, rose Vinegar what is sufficient. Make a Plaster.

§. 35. Cure

§. 35. Cure of Fevers with a Looseness.

IN Fevers with a Looseness *Sylvius* commends the following Electuary;

Take of Conserve of red Roses two Ounces, *diascordium* two Drachms, *confectio de hyacintho* one Drachm, *terra sigillata* one Scruple, Sugar half a Scruple Mix, and give about the quantity of a Hazle Nut often in a Day.

He also commends Drink with red hot Steel or Gold quenched in it. *Wite* recommend Treacle, Garminative, Imbibing, Bezoardick, and Opiate Medicines. Here also *essentia theriacalis*, mixt with essence of *Opium*, will be proper. And in this case we prefer Powders and Electuaries, made of the foresaid things before Liquids; and since there are Receipts of them every where, it would not be worth while now to repeat them.

§. 36. Cure of Sweating Fevers.

IN Sweating Fevers, that are hard to Cure, *Sylvius* commends all Austere things; especially this mixture following;

Take of Water of Plantain three Ounces, Cinnamon, destilled Vinegar each half an Ounce, Syrup of Purslain one Ounce, red Coral Powdered one Scruple. Mix them.

This mixture, according to *Sylvius* his Mind, may be given by Spoonfuls: If any one would have it stronger, he may add half a Scruple, or a Scruple of *Acacia*. *Wille* commends divers things; for instance, tincture of Salt of Tartar, about twenty or thirty Drops twice a Day, tincture of Coral, Spirit of Hartshorn, Urine or Soot. He commends all Chalybeates, and the following Powder;

Take of Powder of Ivory, Coral each two Drachms, *Crocus Martis*, *Sal Chalybis* each one Drachm and an half. Make a Powder. The Dose is half a Drachm twice a Day.

Wite in all Sweating Fevers prefer Saturnines; hence the Antiphthical tincture is of great use in these Sweating Fevers. Nor do we exclude divers austere things, which by closing the Pores of the Skin, do the business.

§. 37. Cure of Pissing Fevers.

Pissing Fevers are cured almost in the same manner, except that Opiates are more proper in these than Sweating Fevers: for *Opium* in regard of its volatil, sharp Salt is Sudorifick, and in regard of its Sulphur Narcotick. Therefore the Flood of Urine in Diabetick Persons is best stopt by Opiates.

§. 38. Cure of Spitting Fevers.

Syrus cures Spitting Fevers by Hydragogues, Diureticks, and Sudorificks, taken in time, that is, before the fit, for the vitious Pancreatick Juice is carried off by these. We here commend all Aperients, especially Spirit of Sal Ammoniack. So relief may be expected from Opiates, especially from *Diacodium*, Treacle simple and *caelestis*, and several others. Here also all Decoctions of opening Woods, and *Thea* will be excellent. This following, according to *Etmuller's* Judgment, will be proper.

Take of Shavings of Juniper two Ounces, Sassafras one Ounce and an half, Bark of *Guajacum* one Ounce, Leaves of Rosemary three Pagils, Juniper Berries one Ounce and an half. Infuse them in about a Quart, or five Pints of Water and Wine, let them stand four and twenty hours in *Balneo Mariæ* in an Alembick, Boyl and destill it to half. Add to the Colature, and what is destilled, of Spirit of Sal Ammoniack three Drachms, Syrup of Marigolds three Ounces. Make an Apozem for several times taking.

Astringent Gargles may be used:

§. 39. Cure of an Odontalgick Fever.

Besides general things, proper for a Fever, in these Odontalgick Fevers, according to *Syrus* his Judgment, the following mixture will be proper, taking a spoonful often before the Fit;

Take of Water of Betony, Fenil, each two Ounces, *aqua theriacalis simplex* one Ounce and an half, *laudanum opiatum* three Grains, Oyl of Cloves four Drops, *Syrupus Stechades* one Ounce. Mix them.

He often applied Treacle, Plaster-wife, to the part affected, with good Success. In these Fevers, in my Opinion *Opium* would be good, which taken inwardly procures Sleep and eases Pain, and applied outwardly to the grieved Part, it stupefies the sense; and so will mitigate divers Symptoms. So root of Smallage, and Benzoin, chewed, cure the Tooth ach. Mouse-ear, Sage, and *Guajacum* Wood, boyled in small Beer, and held in the Mouth, cure the Tooth-ach. Thyme also is proper externally. Various Astringents and Anodynes, may also be applied to the Temples. This following is a sure Medicine;

Take of Mastich three Drachms, *laudanum* two Drachms, Bole Armenick, Dragon's Blood each one Drachm, Opium of *Thebes* one Scruple. With a sufficient quantity of Turpentine, make a Plaster for the Temples.

This

This also may be thrust into the
Tooth;

Put it with Coton into the
Tooth.

Take of Spirit of Wine one Drachm,
Camphore ten Grains. Mix them.

The rest you may find in some
other Chapter.

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BOOK V.

Of Women's Diseases.

CHAP. I.

Of Wind, Dropſie, and falling down of the Womb.

§. I.

VARIOUS are the Diſeaſes, and as various and dire are the Fits, whereunto GOD and Nature have in all Ages, and at all times, ſubjected the Female Sex, be they Maids, Wives or Widows. The time of their going with Child is of dubious Event; but their Child-bearing turns the Odds into the dangerous Scale. Nay, *Riverius* reckons up above fix hundred Diſeaſes of the Womb. And certainly the Womb is the occaſion of infinite Maladies and inconceivable Trouble to Women. Conſider, I pray you the Ails that attend the tender and ſoft Bodies of Woman kind, which often invert, if not totally evert their Structure, and how, while they eſchew one miſchief, they incur a greater. In the time of their Virginitie the Poor Wretches can tell you, how the Wain, Full, and

Change of the Moon afflict them. And when Married, what Trouble are they not Liabſe to? When they are Breeding, they ſometimes long for ſtrange things, and ſometimes loath whatever is ſet before them; ſometimes their Stomach is ſpafmodically affected, and then they are forced to Vomit either all Day, or at ſome certain hours. Towards the latter end of their time, when the Child's Motion is pretty ſtrong, they are ſenſible of Cruel Pains; and if the Child ſeek to enlarge it ſelf, and make its *exit*, how violent is their Pain? But when the Child is near the Birth, what Torture does the Mother not ſuffer? The Scriptures make it ſo exquisite, that no Pain can ſurpaſs this. And when this is over, and the Childbed-purgations come, upon what a Rack do they put Women? Certainly *Helmont's* ſaying is no leſs learned than true, *That a Woman undergoes every Diſeaſe twice.*

A Woman's

A Woman's condition is miserable, compared with Man's; because she is not only Obnoxious to those many Calamities, which the make of her Body, being the same with that of Man's, subjects her to; but she must contend with her peculiar Misfortunes and Miseries, in regard of her Womb, which is *ζωον ἐν ζώῳ, an Animal in an Animal*. But I have long questioned, whether all these things are Mechanically performed in the Womb it self, and whether all these Ails can be raised by the sole Ferment of the Womb. However I shall treat of this in its proper place.

First of all there present themselves, Wind, Dropsie, and falling down of the Womb.

The Wind and Dropsie of the Womb oftentimes deceive the Physician; yea, and Patients themselves, they Dreaming of nothing but being with Child. Therefore the Physician must needs be careful in his distinction, that he mistake not Wind, or the Dropsie in the Belly, for Wind in the Womb; or Wind in the Womb for Wind in the Belly; but much more let him be careful, that he mistake it not for being with Child.

§. 2. Difference.

SWELLING or Wind in the Womb (which is produced only by Wind preternaturally detained in the Womb) differs from being with Child, because in a Swelling a Decrease and Increase may be observed; in being with Child the Belly always Increases by degrees; besides there is usually Milk in the Breasts: And it differs from Wind in the Belly; because, when it is in

the Belly, a rumbling may be perceived all the Belly over.

§. 3. Description of the Dropsie in the Womb.

THE Dropsie of the Womb is a watry gathering, sometimes in the substance of the Womb, sometimes between its Membranes, rarely in its Cavity; and sometimes in the Testicles, out of which I have often seen three quarts of Limpid Water taken.

§. 4. Description of the Falling down of the Womb.

THE Falling down of the Womb is falsely so called; since it is rather the extension of the inner and rugous *vagina* beyond its Seat and Place, within which according to nature it should be contained; for the following Arguments evince, that the Womb it self cannot fall down; because the Strength of the Ligaments, by which the Womb is fastened to the adjoining parts, cannot be separated by the greatest Violence; and the shortness of them, being not a Span long, will not suffer the Womb to turn out at its inner Neck: Therefore the Falling down of the Womb, which is vulgarly so called, is only the falling down of the *Vagina*: For if the Womb it self fall down, it could not so easily be replaced, as we find it is. Yea, I dissected a Woman, who had a Falling down of the Womb, and though it seemed, as if the whole Womb had been fallen down, yet it was fast to the Ligaments. And the Famous *Van Mehern*,

Meckern, a Surgeon at *Amsterdam*, observed it, as well as I.

§. 5. Signs.

AS for the Diagnostick of a Dropsie or Inflation, it is very difficult and obscure, because when the Womb is afflicted with any cold humours, it usually suffers the same Symptoms and Signs; yea, this Disease is very difficult to be distinguished from Impregnation. But you may easily attain the Diagnostick, if you observe the Precedent causes, and the particular Symptoms of this Disease, and the *adjuvantia* and *ledentia*. The usual Symptoms are a Swelling gradually encreasing, and continuing too long time without any sense of Motion or Life, to be a Conception, a Weight also about these Parts, and sometimes a Fluctuation, with a sense of Cold or Pain; there is a wasting of the upper parts, fits of the Mother, and a suppression of the *Men'es*: but there is some Serous or Puitous Excretion, when an humour is gathered in the Cavity of the Womb; and if there be Wind, you may know it by the puffing up and rumbling in it. The Famous *Sebizius* has a History of a Woman at *Strasbourg*, that had a Swollen Belly for above ten years, who had both a Dropsie, and a *Mola carnosæ* in her Womb.

§. 6.

THE Signs of the Falling down of the Womb, are evident of themselves, and told by the Patient. The Signs also of the Causes are easily known, if a Physician look but about him, as he ought; for an

Afflux of Blood may be known by the Signs of a *Plethora*, and the stoppage or excess of the *Menstrua*; and so may a Serous or Puitous Humor.

§. 7. Causes of Inflation and Dropsie in the Womb.

THESE Diseases have the same causes in a manner, as the Tympany and *Ascites* have, which you may see in the Third Book. For here is a particular extravasation of the *Lympha*, and a Concentration of Wind. We doubt not therefore, but there is an acid Phlegm lodged in the Womb, and rareed into Wind, so that it cannot do its Office. But if instead of Wind there be a Viscid and thick *Lympha*, and if there were formerly an Obstruction or Compression of the Lymphatick Vessels, the *Lympha* must needs stagnate and breed a Dropsie.

The Procatartick Causes are Refrigeration of the Genital Parts after Childbed or the *Menses*, or Cold taken in the Hands or Feet, before the time of the *Menses*, or dabling in cold Water, or the abuse of Cooling and Repellent Medicines in inflation of the Womb. Also acid, watry, gross and viscous Seed often causes these Distempers. Hither also may be reckoned too much small Drink, much Sleeping, an idle and sedentary Life, (such as a Woman's generally is) Trouble of Mind, Sorrow, Care, and such things as that Sex lay to heart; Excretions also, both Universal, and Particular of the Womb suppressed, and mischances by a blow, fall, inflammation,

mation, Contusion, *Scirrhus*, Ulcers, and such like cases.

Secundine violently, a *Mola*, a dead Child, &c.

§. 8. Causes of the Falling down of the Womb.

THE Causes of the Falling down of the Womb are either Internal or External; the Internal are the Relaxation and Emolliation of the rugous Coat in the *vagina uteri* by an Afflux of Blood, *Serum*, or some other humors. So likewise the internal Parts may be corroded by the Acrimony of the Humors, that flow thither, and so a Proci- dence may be caused. These Parts also may be torn or dilated by a fall, an Ulcer, difficult Travail, or an unskilful Midwife.

The External Causes are several, an over Cold and Moist Air, Bathing, Oyntments, Cataplasms, and Emollient and Cooling things, too much Drinking of Water, Slippery Diet, Diureticks and Menagogues given in over great Quantity, excessive and unseasonable Sleep, especially in moist and cold places, too violent exercise of the Body, either Walking, Travelling a Foot, Dancing, Riding, Coughing, Sneezing, or Vomiting, &c. Sudden Passions of the Mind contribute their Share, especially Anger, Grief, Care, &c. Excretions either suppressed or immoderate, as the suppression of the *Menstrua*, their excessive Flux, the Flux of the *Lochia*, or the Whites, Costiveness, Looseness, Dysentery, *tenesmus*, excessive Vener- y. And so this Disease may easily be produced by a Blow, a Fall, Contusion, Ulcer, by the Midwife's drawing away of the Child or the

§. 9. Prognostick

NOW we have done with the Causes, we will proceed to the Prognostick. The Inflation and Dropsie of the Womb are difficult to cure, as all other Dropsies are; and by reason of their grievous Symptoms often prove Mortal; such as Inflammations, Ulcers, *Scirrhi* and Cancers, which follow poor Women to their Graves.

The Falling down of the Womb is of it self no dangerous Disease; but by accident it may prove Hazardous, especially if an Inflammation, Ulcer, Gangrene or Mortification supervene; or if the Suppression of the *Menses*, Fits of the Mother, Pain, Fever or Convulsion follow, &c. This Disease, because it is usually of long continuance, is called Chronical, and is difficult to be cured, especially if the Proci- dence be great and inveterate, or produced by a violent cause in a Body, that is Cachectick or weakened by other Diseases.

§. 10. Cure of Wind and Dropsie of the Womb.

THIS thing being premised as to Theory, we will proceed to Practice. Wind and Dropsie of the Womb require a Diet, that is heating, drying, aperient and carminative or discutient. When this is done, Humors, especially the Serous, must be corrected and evacuated; and if there be Wind, it must be discussed.

We

We may proceed therefore firſt with inciding, attenuating, opening, and diſcutient Medicines; to wit, Decoctions of the opening roots, of Wood of *Guajacum*, *Saffafras*, *China*, *Sarſaparilla*, which are Sudorificks, and fo expel the *Serum*. Theſe things alſo are good; Wormwood, leſſer Centaury, *Soldanella*, middle rind of Elder, Bay-Berries, Juniper-Berries, Nettle-Seed, adding uterine things, Roſemarry, Majoran, Penny-Royal, Mugwort, &c. Therefore this following Spirituous and Aromatick Liquor will be proper, to keep all quiet;

Take of Water of Roſemarry, Penny-Royal, Mugwort each one Ounce and an half, *aqua hyſterica* one Ounce, prepared Crabs Eyes, *tartarum vitriolatum* each half a Drachm, Oyl of Salt eight Drops, ſpirit of Elder half an Ounce, Syrup of the five opening roots one Ounce. Mix them.

Here alſo are proper all Carminative volatil Oily Salts, things that move the *Menſes* moderately, Gums, Myrrh, Caſtor, and all Martial and Cordial Medicines. Theſe things premixed, all Hydragogues are proper: for inſtance;

Take of *extractum hydragogum* half a Scruple, Maſtich of Gum *Gutta* five Grains, *Luna Hydragoga* two Grains. With eſſence of Mugwort make Pills, to be taken according to the ſtrength and age of the Patient.

Syrup of Buck-thorn often repeated is excellent in this caſe. And ſo are all Medicines made of Jalap, eſpecially its tincture. Berries of

Elder, Dwarf-Elder, Juniper and Bayes are good, eſpecially in Wind of the Womb;

Take of Rob of Elder two Drachms, *extractum carminativum* one Scruple, Reſin of Jalap ſix Grains, Oyl of Aniſeeds one Grain. Mix them. Make a *Bolus*.

Juice of Briony root collected and given our way, affords great relief. When things are thus prepared, we muſt endeavour to diſcuſs the Humor by Sudorificks and Diureticks;

Take of Spirit of Tartar, *Saffafras* each one Scruple, nitre dulcified fifteen Grains, *antimonium diaphoreticum* one Scruple, Water of Penny-Royal, *carduus benedictus* each one Ounce and an half. Mix them for a Doſe.

Such Diureticks are alſo good, as we have recommended in the Dropſie; and ſuch Plaſters and diſcutient Cataplaſms, as we have there preſcribed, adding always Volatil or fixt Salts, or ſuch things as abound with them, Lungs of Animals and Oily and Aromatick things. Peſſaries, Baths and Fumes may be here ſucceſs fully uſed. *Pharamundus Rumenius* his inſtrument is good to get Water out of the Womb.

§. II. Cure of Wind in the Womb.

ALL things that abſorb an Acid, and conſiſt of aromatick oily Parts are good to diſcuſs Wind. The following mixture was given with good Succeſs;

Take

Take of *Aqua Carminativa* four Ounces, Orange Water drawn with Sack one Ounce and an half, *Spiritus ſalis Ammoniaci anifatus* one Drachm, *Spiritus nitri dulcis* one Scruple, Crab's Eyes prepared one Drachm, Syrup of Orange Pill ſix Drachms. Mix, and give it by ſpoonfuls.

Root of *Doronicum* is commend- ed as a Specifick in this Diſeaſe. Divers Carminative Externals may be uſed, Fomentations, Cataplaſms, &c. You may ſee the Medicines for a Tympany. Sometimes they may be mixt with Hyſterick Specificks. A Bag may be made of Millet with Uterine and Carminative Herbs; and internally Carminatives may be mixt with Purgers. Glauber has an excellent way of getting the Impurities and Wind out of the Womb, by a peculiar inſtrument: He puts in Salt of Tartar, and Sal Ammonick, or the fume of them, that it may the better reach the Womb. Since there is ſeldom an inflation of the Womb, without extravafated Serum, therefore Hydragogues muſt be mixt with Carminatives.

§. 12. Cure of Falling down of the Womb.

THE Cure of the Falling down of the *vagina uteri* is two fold; True and Palliative; and both of them have three Indications: 1. To remove all things that impede the replacing of the *vagina uteri*; ſuch as Inflammation, Tumor, Gangrene, Ulcer, Excoriation, Coſtivenesſ, Stoppage of Urine, the *Menſes* either ſuppreſſed or too fluid. If then there be Wind or Excrements

in the Gutts, the Clyſter following may be given.

Take of the Ingredients for the Carminative and Emollient Decoctions each one handful, Flowers of Bays half an handful, Seeds of Cumin, Caraway each two Drachms. Boyl them in a ſufficient quantity of Common Water. In eight Ounces of the Colature, diſſolve of *Electuarium lenitivum, de baccis lauri* each three Drachms, one Yolk of an Egg. Make a Clyſter.

2. Then let the part, that is fallen down and extended, be put up again into its place, but firſt let it be waſhed with ſome abſtergent or gently aſtringent Decoction, or let it be anoynted; yet then there muſt be no Inflammation, *Eryſipelas*, nor Gangrene. And ſuch a Fomentation may be uſed;

Take of leaves of Oak, Medlar, Plantain each one handful, root of Tormentil, Biſtort each one Ounce, Alum half an Ounce. Shred them, put them in a Bag, boyl them in Wine, and apply them as they ought, to the part.

A Powder may alſo be ſtrewed upon it, made of Conſolidants and Aſtringents, ſuch as Frankincenſe, Myrrh, Maltich, *Sarcocolla*, red Roſes, and Juice of *Hypocyſtis*. But above all things we muſt take care, when it is replaced, to keep it in its place, and knit it to the adjoining parts. To which end the following Decoction will be proper;

Take

Take of Rupture wort one handful and an half, Flowers of red Roses, leaves of Mugwort, Motherwort, each half an handful, Root of Plantain, Bistort each one Ounce, boyl them in red Wine or Smith's Water, and foment or wash the *vagina* with it.

Then use this or some such like Liniment;

Take of *Unguentum Comitissæ* six Drachms, *Crocus Martis astringens* two Drachms, Powder of Mastich half a Drachm, Oyl of Myrtles, what is sufficient for a Liniment.

Then strew on some of the fore-said Powder, and set your self to the reduction of it, which you may best do, by placing the Woman on a Table, or in a Bed, so that her Head may be low, and put it gently into its former place, either with your hand alone, or with warm Cloths. Let the Patient draw in her Breath. And when the part is put into its former place, care must be taken to fasten it inwardly, for which end divers Plasters may be applied to the *Pubes*, and to the part it self; for instance;

Take of *Emplastr. matricar. Rumel.* as much as shall be sufficient to amass with a little Bear's Grease. Spread it on Leather. Or,

Take of our usual Plaster *contra rupturam* what is sufficient, *Crocus Martis astringens* three Drachms. Mix them with some Bear's Grease.

Palliatively also the protuberance of it may be hindred with Balls or Rings (which I prefer before Balls:) Wax, Rosin, or Gumm, is good.

In the true Cure internal Vulneraries and light Astringents must not be neglected;

Take of rasped *Guajacum* five Ounces, Sassafras, *guajacum* Bark each one Ounce, leaves of Ladies Mantle, Winter Green, Speedwell each half an handful, seeds of Plantain two Drachms, boyl them in a sufficient quantity of Common Water. To thirty Ounces of the Colature add of *Syrupus de Symphyto Ferneliæ* three Ounces. Mix them.

Then the Symptoms, as there shall be occasion, must be abated.

Pessaries also made of Astringents are good: But before these and all other things some prefer fumes of a Salt Eel's skin, Hypocystis, dried Cow's Dung, Alum, Musk, *Acacia*. A Clew of Hempen Yarn may be applyed with Wax; and ashes of Beetles may be often strewed on the Part, or the patient may sit upon cold Oaken Wood.

C H A P. II.

Of the Hysterick Passion, or fits of the Mother.

§. 1.

THE *Hysterick Passion*, is in Latin, from the most Urgent Symptom, called *Suffocatio Hysterica*, in English we call it, *Fits of the Mother*, because it is vulgarly held to arise from the Mother or Womb, but how truly, I shall not now examine, since that is decided by others already. It is a Concurrency of divers Symptoms, arising generally from an austere humor, and a Disorder of the Spirits in the Womb. *Welmont* calls it *Asthma uterinum*. In Men some call it, *suffocatio hypochondriaca*, as in Women it is called *suffocatio uterina*. *Sylvius* calls it *suffocatio* and *strangulatio hypochondriaca*, both in Men and Women. It is certainly a most grievous Disease, and comprehends various Symptoms under it; and therefore it frightens not only the poor Patients, but the very Physicians and By-standers: For Women sink down on a sudden, their Body is Chill, their Breath and Speech is gone, their Pulse ceases, and sometimes Sense and Motion is abolished, so that they ly in a manner for Dead. But more of these things in the Diagnostick.

Difference.

THIS *Hysterick Passion* is very Analogous to an *Incubus* in Men, and in some things agrees with an *Apoplexy*. But it is distinguished from that, because in the *Hysterick Passion* there are Convulsions and Pain; but in an *Apoplexy* there are none of these Symptoms. And in an *Epilepsy* there are far more grievous Convulsions than in the *Fits of the Mother*. And thus this disease may easily be distinguished from other Cognate Diseases. But we need be the less solicitous about distinguishing of these Diseases, because the Cure in all of them is the same.

§. 2. *Part affected.*

WITH the old *Galenists* the place affected is the Womb, which they, as well as the Vulgar, thought arose up to the Throat. But this opinion, that was formerly held by the Vulgar and (which I admire at) by most Physicians, is now quite confuted by the Moderns; so that there is no need to say any more against it. *Sylvius* takes the *Pancreas*, the Guts, Stomach and Gullet for Parts

Parts affected, which in this Disease seem to be contracted. *Wilmont* says, in Fits of the Mother, the Patients complain, when they are able to speak, of a Tension of the Inter-costal Muscles, and they think, they are strait girt with something about the Ribs, or that a Stick is thrust from below into their throat. And therefore he says, that the Stomach carries the Keys of the Womb. *Willis* reckons it is the Brain; because the Nervous kind is affected. *Wille* blame not only the Womb with its Vessels and Glands; but the Nerves and the first ways, wherein the cause often lies, which uses to be communicated to the Heart and Brain, and hence comes a multitude of Evils. But before we proceed any further let us inquire into the principal Symptoms; that from them, as from known premises, the genuine cause of this Disease may be assigned.

§. 3. Diagnostick.

Difficulty of Breathing accompanies this Disease, there is a choaking in the Throat, and a kind of a Bullet in it, or as if a Stick were thrust into the Throat, there is rumbling in the Guts, sometimes nauseousness, seldom Vomiting, Yawning, Palpitation of the Heart, and Heart-burn are often its attendants. In the Fit the Pulse is low, sometimes quite abolished for a quarter, half, or a whole hour, now and then for a Day or two, so that some such have been taken for Dead, no signs from whence we might judge there was Life, appearing; as abundance of creditable instances in good Authors testify. The

Throat is so straitned that the Patients seem to be strangled, then a notable Paleness and Chiliness follow, Motion and Sense are sometimes wholly, sometimes only in Part, taken away. Oftentimes a round thing may be felt in the *Abdomen*, to pass up to the Diaphragm, which they say is the Womb; but they are mistaken; because the Womb is fast tied by its four Ligaments. There are also Swoonings, various Convulsive Motions and Epilepsies, the *Menses* are often suppressed. A Pulsation may be felt in each *Hypochondrium*, especially in the Left. The Patients complain of restlessness, Thirst, divers Pains in the Head, especially Stomach, Limbs, &c. Sometimes they are Costive, and yet Lenitives make them worse, as I observed in a Woman, who upon taking an emollient Clyster with half an Ounce of *Electuarium diacatholicon* in it, went to Stool twenty times, Swooned, and her extreme Parts were Cold. At length, unless the Patients die, after the Fit is over, Motion and Pulse is restored to the Heart and Arteries, the Breast extends, and respiration is renewed, their Speech comes to them, and they complain of Oppression at the Heart. Some cannot bear Perfumes, to wit, Amber, Musk, Cinnamon, Roses, &c. The Scent whereof several Men cannot endure; we have an instance of it in *Lewis* the Fourteenth, the present French King. And these are the most grievous Symptoms of this Disease: but it were impossible to name all.

§. 4. Cause.

NOW we will proceed to the Causes of this Disease, which, in the Opinion of the *Salernitis*, are Malignant and Poysonous Vapors proceeding from Blood and Seed corrupted in the Womb, and from other humours gathered there, acquiring a Malignant and Poysonous Nature, which are elevated by the Veins and Nervous Kind to the upper Parts, and as they are carried to this or that, produce divers Symptoms.

§. 5.

Sylvius seems in a manner to agree to this Doctrine; but he expresses the thing otherwise, and says, that a Contention is raised between the Pancreatick Juice, carried into the *intestinum tenue*, and Bile there, consisting of a lixivial Salt, Oyl and Volatil Spirit; the Author terms it an Effervescence. From which vitious Effervescence, he questions not, but austere Vapors arise to this or the other part, and from thence all those Symptoms, which we meet with in Hystericks, arise.

§. 6.

Helmont thinks, that this Disease comes not from a Corporal confluence of Humors and Vapors in the Ventricles of the Brain, but that it is a Disease by Deuteropathy; and that the Womb, which would otherwise be quiet, is put into a rage by Anger and Grief. Indeed the Womb, as he says, never gets higher than the Diaphragm:

However it makes People Apoplectick.

§. 7.

Vallis reckons this among Convulsive Diseases, and he derives the Causes from thence.

§. 8.

WE think, that in the lower Parts of the *Abdomen*, but especially in the Womb, there are animal Spirits, which being contained in the Fibres of the Womb, if they be obsequious, gentle Motions are constantly made: But if these Spirits be much provoked by something vitiously Austere, that is apt to ferment, then they become Tumultuous, and being thick crouded, and not able to get out, they distend, tear, and dilate the Membranes among which they are interwoven, and puff them up, as if they were blown up with Wind, hereupon the Folds of the Womb and Mensentry being moved by the Spirits, do swell, jump and leap within the *Abdomen*, and likewise the Coats of the Stomach and Guts being in like manner puffed up, by the Expansion and Impetuosity of the Spirits, are variously distended and tormented with Wind: In this Convulsion, while the Guts and *Abdomen* are Convulse, the Motion is sometimes continued to other Parts, hence comes that Globe in the *Abdomen*, and from the spasmodical contraction of the Throat, that Bullet in the Throat: hence come Epilepsies, &c. In this most grievous Disease, from the same Acid or Austere at length there

there supervenes a stagnation of the coagulated Blood, and from thence a total Suffocation of the heart.

Among the Procatartick Causes we reckon a cold Air, Sowre or Austere Food, or bitter, and sometimes sharp, all perfumes held to the Nose, Musk, Cinnamon, Roses, and Civet. Sleep and Watching exceeding their bounds, are hurtfull, and so is excessive or unseasonable exercise of the Body, and a sedentary Life; but Sudden and Violent Passions of the Mind, such as Grief, Care, Fright, Anger, Love, &c. are most effectual Causes, and last of all Excretions, when there are either none, or intermitted, or excessive.

After the Hysterick Fit has lasted a while, the Patients come to themselves, very much tired with their Convulsions, and their Limbs ake as if they had been beaten with Staves; and indeed the Cause is in both Cases the same: for as by the blow of a Staff the Fibres are broken, whence comes Pain; so likewise by the Convulsions the Fibres are broke here and there, which occasions this Pain.

§. 9. Prognostick.

WE will now briefly touch upon the Prognostick. This Disease is not very dangerous: for of it self it is seldom Mortal, though in regard of conjunct Diseases, or supervening Symptoms it may now and then prove Mortal: But it lasts long and is contumacious, especially if time have settled it, or if it be attended by many grievous Symptoms, principally in old Women. And Virago's are altogether as liable to this

Disease as sedentary Women, because their Blood is spirituous, and their nervous texture strong. It is a dangerous Disease for Women in Childbed, and wth Child. Sometimes it degenerates into an Epilepsie, an instance whereof I knew in this City. That Aphorism also of Hippocrates §. 35. has relation to this place, *Sneezing supervening to a Woman with Child, is good*; because by that violent Motion, the Humors, they being but small in quantity, that cause the obstruction, are expelled. So also it is good, if plentiful belchings supervene, which Sylvius has observed, for they often put an end both to the Fit and the Disease.

§. 10. Dietetick Cure.

OUT of the Fit look well to the Diet, and avoid all abuses in it. Let the Air be temperate; avoid a sharp, Northerly one, and the smell of a Candle Snuff, Musk, Civet, and other Sweets.

The Food must be of a good Juice. Forbear all things that are Austere, Acid, Salt, and Difficult of Concoction and Fermentation, such as Chestnuts, &c. All things likewise, that are Smoak-dried, are bad. The Drink must be well wrought Beer or small Wine. All Beer, that is not well Boyled and Fermented, is naught, and so is drinking of Water, new Wine, &c.

Motion and Rest, the excreta and retenta, especially the stoppage of the Menfes, a Costive Body, and Retention of Seed, if they exceed bounds, fail not to occasion this Disease.

Sleep and Watching must be kept within bounds; for excess in them does harm, because it breeds crudities.

The *Mind* must be kept cheerful; Sorrow, Fear, Conternation at unexpected events, and such Passions may easily cause this Disease.

§. II. Pharmaceutick Cure.

THE old *Galienists* have two curative intentions in Fits of the Mother, one in regard to the Fit when it is present, the other in regard to the time free from the Fit. They therefore endeavour, that the malignant Vapor rising from the Womb may be dissipated, and averted from the principal parts, then, that the Humor, whence the Vapor arises, may be evacuated, and cast out of the Body, and at length, that the Parts may be strengthened. If a Woman therefore be in a violent Fit, they commend loud Shouting, plucking the hair, and the ears especially, Ligatures and Frictions; but above all, according to our observation, tickling the soles of the Feet discusses the Fit. They are also for cupping the Calves of the Legs and the Thighs with much Flame. They hold strong scented and stinking things to the Nose; such as Castor, *asa fetida*, smoak of Partridge Feathers, of Hoofs and Horns, &c. that the Malignant Vapors may be discussed: for which end they burn the great Warts, that grow on Horses Legs, as a secret, and hold them to the Nose. They apply divers sweet things to the *Pudenda*, such as Civet, Musk, and *Gallia moschata*, that the Motion of the Humors and Spirits may tend downward, and be abated.

They make Revulsion also of the matter, that flies upwards, by Clysters made of Uterines and Carminatives. And to take away the matter of the Vapors it self, they apply Pessaries (which they barbarously call *nascalia*) to married Women they put divers sternutatories into the Nose, they drop Oyl of Sage, Amber, Spike, &c. into the Ears; they apply a *Galbanum* Plaster to the Navil. And if the Fits proceed from stoppage of the *Menfes*, they order bleeding, and give several Uterines and Anodynes, which you may find in several Practitioners.

Out of the Fit they endeavour, if it come from corrupt Seed in the Womb, to evacuate it by Uterine Clysters and Pessaries; they apply proper Plasters and Oyntments to the Region of the Womb, for which end *Sennerthus* commends the following Unguent;

Take of liquid *Storax* two Drachms, Cloves, Seed of *Agnus Castus*, *Angelica* each half a Drachm, *Alipta moschata* one Scruple, Oyl of Nard, white Lilies, Wax, each what is sufficient. Make an Unguent. And the Plaster following;

Take of Seed of *agnus castus* one Drachm, all the Sanders each half a Drachm, Powder of white Roses one Drachm, Gum *tacamahaca* one Drachm and an half, *caranna* two Drachms, *alipta moschata* half a Drachm, Turpentine, *ladanum*, Wax, what is sufficient. Make a Plaster according to Art, and let it be duly applied.

But

But if the Fits came from the Retention and Corruption of the *Menstrua* all things that provoke the *Menstrua*, which shall be hereafter mentioned, will be good, and bleeding, also, as was said before.

And the only aim of all the Galenists is, to discuss malignant Vapors, and to strengthen the Womb, for which end they extol Bawm, Mint, Penny-royal, Calamint, roots of Angelica, Masterwort, Spignell, &c. but especially Briony roots, and they destil divers Waters from these and other Aromatick things, and they make Powders of them, such as *species galangæ*, *diacalamintæ*, *diacinnamomi*, &c. They also highly value Treacle, Mithridate, *requies Nicolai*, and Castor, out of which they make divers Receipts, which all Galenical Books are full of.

§. 12.

Paracelsus above all things commends anointing the Navil with Oyl of Tin, which is thus made; dissolve Tin in *Aqua fortis*, and reduce it into Cerus, this must be washed and dissolved into Crystals, which being destilled will yield a sweet Liquor and yellow Oyl; out of the remainder a Salt may be got, which in a Cellar will dissolve into Oyl.

§. 13.

Helmont says, although sweet and grateful Scents indispose many Women; it does not therefore follow, that all strong and stinking things must cure them: for he says, that burnt things and

the smell of burning Sulphur, do not refresh Hysterick Women, as they stink, but as they check and destroy the external *Idea's* which are impressed on the Womb. The Author recommends all bitter things to Hysterick Women. His Hysterick *arcana* are *dulcedo Sulphuris* made of *vitriolum Veneris*, tincture of Coral, essence of Amber and Agate, white dead Nettle, stinking Horehound, Rue, Southernwood, Sage, Nep. berries of Elder, Dwarf Elder, *asa ferida*, the wart of a Horses Leg, red Coral; he goes on and says, all simples do not equally cure bewitched Persons; so neither do they Hysterick Persons; for each of them has its singular endowment of *Idea*, and takes away its opposite Disease. Wormwood, Sage and Rue drive away *Idea's* of fear. Mugwort, Nettle, stinking Horehound, and black Currans are good in cases contracted from Grief. *Asa ferida*, Castor, Elder Berries, and essence of Agate are good in cases of Anger. *St. Johnswort*, and *Phutertium* in mad *Idea's*. A dried Hare, the testicles of some Beasts dried in the Smoak, a Stag's Pizzle, *agnus castus* and Amber in Libidinous *Idea's*. Also *electirum minerale*, prepared Coral, and greater *Arcana* are next to an universal Medicine, near to which the Secundine of a first born Male, the Gall of a Snake, &c. do approach. And these *Arcana*, *Helmont* says, seldom fail a Man. On the contrary in Diseases of the Womb he condemns all sweet things, because in his Opinion they disturb the quiet of the Womb.

§. 14.

Willits in this Case commends all the Antispasmodicks, which he advised in an Epilepsie.

§. 15.

Splutus, be the cause what it will, for Fits of the Mother commends all volatil Salts, and above all of them, Spirit of Sal Ammoniack, about 3 or 4 Drops or more, taken often in a spoonful of Wine, or some other proper Liquor. For discussing austere Wind and Vapors, beside this Spirit of Sal Ammoniack, he commends Spirit of Castor, its tincture, and Oyl of Amber, Mace, &c. destilled. But when the steams or wind are both glutinous and sharp, he highly values *spiritus nitri dulcis*, and Spirit of Orange Pill, Rosemary, &c. But where the Vapors are more Watry, beside the foresaid Volatil Salts, he advises the giving of Aromatick tinctures of Cinnamon, Saffron, Mace, not neglecting now and then to use Hydragogues, for to abate the redundant watry Humors in the Body. For discussing the austere Wind and Exhalations, that get up to the throat, he commends the above said Volatil Spirit of Sal Ammoniack or some Aromatick or Oleous Salt. Among Alteratives he commends all Aromaticks. Among Roots he commends root of *Asarum*, white Dittany, red *Iris*, tincture of Sowbred, lesser Centaury, *Aristolochia rotunda*, Gentian, *Schoenanth*, Spike, &c. Among leaves, Savine, Penny-royal, Mugwort, Rue, Bawm, Horehound, Calamint, Horse-

mint, Nep, Flowers of *Cheiri*, Saffron, Rosemary, Broom. Among Seeds, *nigella*, Parsly, Lupines, Smallage, Fenil, Lovage. Among Berries, Bay. Among Spices, Cinnamon, Mace, *cassia lignea*, Xylaloes. Among Gumms, Myrrh, Castor, *Gambanum*, *Sagapenum*, Amber, Mastich, *Storax*, *lacca*, *asa fetida*. Among Metals, Filings of Steel. But he especially commends his *Sal volatile oleosum*.

§. 16.

VVE do all we can, when we are curing this Disease, that out of the Fit, the cause being removed, the Acid, Austere or Pontick Humor may be corrected, and in the Fit that the Spasmodick Concussion and Suffocation may be removed. All things take away the spasmodick Concussion, which reduce the Animal Spirits, as they are making their Excursions, into order again: for which purpose we commend all volatil urinous Salts, and other fetid and subtil, sharp things, such as volatil Spirit of Sal Ammoniack, Soot, Horses hoof, tincture of Castor, Amber, *asa fetida*, Paper, or Partridge Feathers, burnt. The virtue of such subtil Scents or Stinks shows it self almost by a sensible effect in these Persons; as the smell of generous Wine or any other Aromatick thing does in such as are extreme Weak or in a Swoon; so that sometimes it seems to call them to Life again. In several Hysterick Women strong scented things, such as *asa fetida*, Castor, burning of Feathers, and smelling to Volatil things do good. Perfumes are able to raise stupendous Symptoms,

Symptoms, inasmuch as they affect the animal Spirits in the Womb: but 'tis admirable, that Perfumes taken in substance should effectually stop Fits of the Mother. *Horatius Augenius* has the following experiment, as it is related *l. 12. Epist.* But you must observe here that Idiosyncrasies do notably vary;

Take of the best Musk five Grains, Cinnamon, Cloves, Nutmeg each one Scruple. Give it in a Glass of some vehicle.

In the same place he commends Musk Pills as an effectual remedy; but have a care that the scent of them reach not the Nose. There are some Women also, that cannot bear Castor and stinking things And this you must also observe in your Practice, that Women who are Hyfterick from their Liver, abhor sweet things. Wherefore a Physician must abstain from them.

Yet the effect is the certainest from volatil fetid things. The following Powder seldom failed me;

Take of *fecula bryoniae* one Scruple, prepared Pearl half a Scruple, red Coral prepared, Castor each one Scruple, warts of Horses legs prepared half a Scruple, distilled Oyl of Rue, Amber each five Drops. Mix them. Divide it into three equal Parts, give them successively in a convenient Vehicle.

It wonderfully appeases the Plastick Spirit, and the Convulsive Coarctation of the Throat and other parts presently ceases. A Grain or two of *laudanum opiatum* may

be added, And this that follows is as good;

Take of *Pulvis absorbens Wedelii* one Drachm, *bezoarticum Foviale*, Cinnabar of Antimony each one Scruple, Castor half a Scruple, *laudanum opiatum* one Grain. Mix them.

For in the Hyfterick Passion Jovial, Saturnine, Anodyne, Castorine, and Cinnabarine Medicines, perfectly quiet these Convulsive Motions, imbibed the austere Humor, and perform the Cure. *Tinctura bezoartica*, with Spirit of Sal Ammoniac, and tincture of Castor, or *elixir uterinum* mixt with *essentia anodyna*, are generous remedies. I have found the following Hyfterick *laudanum* by my Practice to be anoble Medicine, which I am willing to communicate for the benefit of the Sick.

Take of extract of *Opium* made with Vinegar one Drachm, Zedoary half a Drachm, warts of Horses legs, root of *Calamus aromaticus* each half a Scruple, native Cinnabar, Castor each twelve Grains, Saffron fifteen Grains, Oriental Bezoar Stone half a Scruple, Oyl of Amber, Rue each what is sufficient. Make an extract according to art. Three or four Grains of it given in Bawm or Calamint Water, do Wonders. If you want these Waters, you may give it in table Drink.

Johannes Agricola cries up the following *laudanum opiatum*;

Take

Take of *laudanum opiatum*, extract of Liverwort each one Drachm, *oleum Saturni*, *Jovis* each half a Drachm. The Dose is two or three Grains.

Extract of Liverwort is made thus;

Take of Liverwort a sufficient quantity, pour some Bawm Water to it, put it into a Glas, for extracting the tincture, draw it off to the consistency of an extract.

When the Disease is very bad, there is a stagnation of the Blood, some way grown Grumous in the *Præcordia*, for the Patient can neither move her Breast, nor draw her Breath. For correcting the Acid, removing the *Coagulum* of the Blood, and for facilitating respiration, this following will be good;

Take of Crabs Eyes prepared, one Scruple, *antimonium diaphoreticum* half a Scruple, *sperma ceti* one Drachm, Castor one Scruple. Make a Powder. Give it in warm Broth.

All hot volatil Salts correct this Acid, such as *Elixir uterinum*, *febrifug*, *Mynsyche*. because by their bitterness they correct a vitious Acid. Spirit of Sal Ammoniack mixt with Oyl of Oranges, or of Rue, with Amber, does Wonders. And so does essence of Castor, or *asa fetida*, or Myrrh, or this following;

Take of Water of Swallows with Castor two Ounces, Bawm three Ounces, *Spiritus salis Ammoniacki Succinatus* half a Drachm, volatil Spirit of Man's skull one Scruple, Syrup of Bawm six Drachms. Mix them.

Liquor cornu cervi succinatus, also tincture of Elder Berries, and all volatil things, as we said, are proper in as much as they recal the exorbitant Spirits to the Womb; for example;

Take of Water of Bawm three Ounces, zedoary six Drachms, *Spiritus salis ammoniaci rutaceus* one Scruple, Spirit of Harts-horn, tincture of Castor each half a Scruple, Syrup of Mint six Drachms. Give it by spoonfuls.

Take of *aqua naphæ*, *carminativa* each two Ounces, *Spiritus cornu cervi tartarizatus*, tincture of Amber each half a Drachm, *asa fetida* twelve Grains, Syrup of Cinnamon five Drachms. Mix them.

Also *Spiritus urinosus salis Ammoniacki* given to half a Scruple, with essence of Castor is reckoned a most excellent Medicine in Fits of the Mother. Chalybeates also are of excellent use. And so the Spirit of Secundine is reckoned as a certain and specifick experiment in this Disease. The following balsam is an excellent Anti-hysterick;

Expose Soot to the cold Air, till you find a Viscous and liquid Balsam,

Balsam, which you must keep for use.

Antimoniates, especially essence of Antimony, easily takes off the Fits of the Mother. *Thomas Bartholinus* commends a Medicine made of a Stag's and Bull's Pizzle, cut out at a proper time, as a secret in Fits of the Mother and the Colick.

Near the time of their *Menses* poor Women are often miserably afflicted with Fits of the Mother. *Etmuller* commends this following.

Take of *aqua hirundinum cum castoreo* one Ounce and an half, *Carminativa* one Ounce, Crab's Eyes prepared one Scruple, *antimonium diaphoreticum* half a Scruple, *sperma ceti* one Drachm, Syrup of Orange Pill half an Ounce. Mix them well.

Let the Patient take two or three spoonfuls of it now and then; for, according to my experience, the Fit is not only thereby eased, but the Flux of the *Menses* promoted. In this case one may bleed in the Foot. Also this following extract of *Crolius* is highly to be valued;

Take of extract of Castor, Saffron, Mugwort each half an Ounce, Salt of Mother of Pearl two Drachms, Oyl of *Angelica*, Aniseed, Amber each half a Drachm. Mix them. The Dose is a Scruple or two at the beginning of a Fit; or for Prevention, once in the beginning of every Month.

In the Fit sharp Clysters may be given of Uterine and Carminative things, in which about three Drachms of Salt of Mugwort may be put. But you must have a care of such as are enclined to swoon and are weak. Therefore the Patients must be asked, whether they are able to bear Purges or Clysters.

Here you must observe, that all Antiepilepticks are proper in this case, and that this Disease uses to be cured as an Epilepsie; nor must externals be neglected in the Fit. And this you must observe in general, that though the Symptoms seem to grow worser by some Medicine; yet you must not therefore judge, that the Medicine was improper. Externally, for raising of the Patient, stinking things must be held to the Nose, such as smoak of the warts of Horses Legs, Feathers of Partridge and other Birds, Tabaco, blue linen Cloth. But volatil Spirit of Sal Ammoniack surpasses all these, or this stinking one, that follows, of Amber;

Take of Amber, *asa fetida* each three Ounces, Sal Ammoniack one Pound, quick Lime, or Oyl of Tartar two Pounds. Destil them according to art, and keep them for use.

Asa fetida, Castor, Rue, and Caraway seed are Common, some commend a fume of *Bitumen* as a secret. Some Women can bear nothing but the smell of Vinegar or Wine. *Thomas Bartholine* makes a Girdle, which, he says, stops Fits of

of the Mother. A Sponge may be wet in a mixture of *Spiritus cornu cervi* and *salis ammoniaci aromaticus*, and so held to the Nose, all which things wonderfully appease the Plastick Spirit. Several spirituous things may be put into the Mouth, especially *aqua vite*; the Nostrils may be anointed with rectified Oyl of Amber, or Spirit of Sal Ammoniack. Let the Temples be anoynted with Apoplectick Balsam, Rue, Amber, and other fragrant things. Sweet scented things, as Musk, Civet, Apoplectick Balsam, and such things must be applied to the Navil and the *Pudenda*: for they repel the Enemy, and comfort the Spirits. The Patient must rather sit than ly in the Fit, that the bowels may not press so on the Diaphragm. Blow Sneezing Powder into her Nose, or Tabaco Smoak, to raise her. Divers Liniments and Plasters maybe applied to the Navil. This following is reckoned one of the best;

Take of Gum *Galbanum*, *tacamahaca* each equal parts, Balsam of Peru one Drachm, Oyl of Amber, Castor, each one Scruple. Make a Plaster according to art. Or,

Take of *asa fetida*, *Galbanum*, Ammoniack each two Drachms, Treacle one Drachm, Oyl of Amber, Castor each five Grains. Mix them. Make a Plaster. Or,

Take of Gum *Galbanum* dissolved in Vinegar half an Ounce, extract of Castor two Drachms, Oyl of Spike, Amber each one Drachm. Mix them. Make a Plaster according to art.

Some commend Yarn boyled, and applied warm to the Womens Groin.

Thus much concerning the giving of Medicines, while the fit lasts; but out of the Fit this Disease requires another Method. Out of the Fit such things are proper as are fit to imbibe, precipitate and any way correct the pontick Acid. And we must have regard to the Womb, therefore there will be need of all those specifick Uterines, which were before recouated by *Sylvius*; to wit, all aromattick and volatil things, and all Precipitants. When the austere, pontick, and oftentimes viscid Humor is corrected, it will be time to carry it off. For which purpose divers Purgatives are good mixt with Hystericks The following Physick Wine is of no contemptible use;

Take of leaves of Wormwood, *Cardius benedictus*, Bawm, Spleen-wort, Wall Rue each half a handful, root of Zedoary, Eryngo, Burnet each half an Ounce, *Angelica* two Drachms, best Rhubarb three Drachms, leaves of *Senna* one Drachm, Seed of Serimountain, Fenil, Caraway, each two Drachms and any half, rind of Tamarisk, Ash, Orange each three Drachms, Crude Tartar half an Ounce. Shred them, and put them in a bag.

If any one love Pills, here follow some;

Take of *species diacymini* two Scruples, *asa fetida* twelve Grains, extract of Castor half a Scruple,

a Scruple, extract of Saffron five Grains, extract of Rhubarb, Resin of jalap each half a Scruple, distilled Oyl of Amber, tincture of Caltor each fix Drops. Mix them. Make Pills for several Doses. But you must be cautious how you Purge.

After these things divers Alterers may be given, especially Oily Volatils, the *Sal volatile oleosum Sylvii*, or *Spiritus salis Ammoniaci aromaticus*; and the use of them may be continued for some time. Sulphureous Baths will be proper, and so will all Jovial, Martial, Saturnine, Cinnabarine, and all manner of precipitating Medicines; various Decoctions likewise of the Woods, and other Alkali Salts, Medicines of Myrrh, &c. are good. When, according to the Opinion of the Ancients, you have a Mind to hinder breeding of Seed, then venesection, which is not otherwise proper in this Disease, will be adviseable, and there may be given *agnus castus*, Camphore, Rue, *unguentum refrigerans Galeni*, &c. But you must have a care not to offend the Womb.

These things following are Empirical; *Johannes Arcularius* says *pr. tr. 6. p. 17. 9.* If any one every other Day before Supper, will take two Scruples of *Pilule de Arthemisia*, she will be kept from Fits; and she can find nothing more effectual.

Tryphera magna half a Drachm, dried Chamomil one Scruple may be given fasting with Wine or Sugar.

Spiritus vitrioli Veneris (about three Drops) is good against

all Hysterick Diseases. *Rhodericus a Castro* gives a Drachm of *Venice-Treacle*.

Johannes Crato has this singular Medicine. He dries Walnuts, and beats them to Powder, and gives two Scruples of it, with a few Drops of Oyl of Amber.

Johannes Faber commends Salt of Vitriol, because it vomits, and promotes the *Menstrua*.

According to *Claudius Deodate*, *Sal Jovis* put into or spread upon the Navil is an excellent remedy.

Petrus Forestus says, one who perceived her Fit coming presently prevented it by holding root of Masterwort in her Mouth, and chewing it a little, so several Authors extol Garlick shred, and applied to the Navil.

Heurnius gives a Scruple of Flowers of Nutmeg in Wine, and blew Bottle Water, wherein the quantity of a Hazzle Nut of Camphore was burnt.

Fridericus Hofmannus dissolved Hens dung in white Wine, mixt it with some Cordial, and gave it often with great Success.

So *Simon Pauli* magnifies the leaves of *Thea*, applied hot to the Region of the Womb and to the Navil.

Quercetan brags, that only the Seed of Garden Parsnep dried and powdered, and about half a Drachm of it given in a little white Wine or Bawm Water is a peculiar and a specifick Medicine for Fits of the Wother.

I. D. Rulandus says, that Cow's Dung, or Deer's, or Sows Dung, given in hot Wine presently stops the Fits of the Mother. He also affirms, that linen Cloths dipt in Cows Urine or Dung, and applied warm to the Navil eases the Fits.

Schroder commends Oyl of Galbanum used either inwardly or outwardly.

Varignana says, the hair of the Patient burnt, and the Smoak of it received, does wonders.

CHAP.

C H A P. III.

*Of the Defect, Imminution, and disorderly Flux
of the Menfes with Pain.*

§. 1.

Women's Health wholly depends upon Nature's Law, in a convenient Motion and Measure of Blood to be voided by the Womb; so if that affair go right, generally all things are well: but all is out of order, when this evacuation of Blood preternaturally fails, or is suppressed, or is only abated. For this Ebbing and Flowing of the Blood gives a Testimony of the Constitution of the whole Body. If it stop or do but *abate*, it makes the Body pale: Such therefore as the *Menstrua* are, so fares it with a Woman, as to her health. The obstruction of them is a common Calamity, incident to young Women above all others, and is the foundation of other Maladies. Ordinarily they begin to come at thirteen or fourteen years of Age, sometimes sooner, sometimes later. So we knew a Girl, that had her *Menfes* at five years Old. They cease about forty five or fifty. At these Ages therefore you try but in vain to bring them. Nor must you procure them in Women with Child (in whom the superfluous Blood turns to nourishment for the

Child) nor in such as give Suck, or are Sick of any grievous Disease.

§. 2.

When the Flux of the *Menfes* quite ceases, it is called *Suppression*; when they Flow, but not sufficiently and the Patients are Sick, it is called *Imminution*. And though this Flux, when it first comes in young Women, does not exactly observe every Month (for some are Purged but once in three Months) till in process of time there be greater store of Blood; yet then it observes the ordinary time.

Here a weighty Question occurs, What may be the Cause, why this Flux keeps so exact a Period? Here Authors are at odds one with another. Most of them ascribe it to the Moon; because according to the difference of its *Phases* it has a great influence in altering the Humors of Humane Bodies. Yea some attribute so much to the Moon, that in all Diseases in a manner, they look to the *Phases* of the Moon, but oftentimes by tarrying for a more happy aspect of the Moon, they suffer their Patient to die.

die. Now though the Moon have a great Power in altering the Humors of Humane Bodies; yet this can by no means be granted; since the disposition also of every subject Body, and of the Plastick Spirit, which is altogether peculiar, may do much, and especially the course of Life, as experience and Womens own Confession testifie. And this verse does not always hold true;

*Luna vetus vetulas, juvenes nova
luna repurgat.*

Regnerus de Graf thinks, that the Cause is some definite Motions of Nature, not yet discovered. But he explains one obscurity by another. In our Opinion the Flux is Monthly, because the Blood Flows abundantly to the Vessels of the Womb, which nature has made many in number and large for nutrition of the Child, and tarrying there it pricks the little Arteries, and so by the animal faculty is discharged. And when abundance of Blood is sent thither to be expelled, it cannot chuse, but in process of time it must be gathered in such store as to regurgitate into those Vessels, by which it came; for when once way is made, the Blood that is gathered will go that way again.

Definition.

WE say therefore that a Suppression of the *Menses* is a total preternatural deprivation of the Flux of the Menstruous Blood, which should by right be once in a Month, arising from some fault either of the Blood,

or the Vessels, or from a preternatural organical Constitution of the Womb.

Diminution, is, when the Menstrua Flow not so much as they should.

§. 3.

THE Subject of these Diseases by common consent of the Ancients is reckoned, the Womb. Some take the Stomach for the Subject, others the Liver, some the Spleen, a few the Kidneys. But it is certain, that the Blood is the causal Subject, or the Proximate and Primary object: for if the Blood be tenacious, thick, cold and coagulated, then the *Menses* stop, because the Blood cannot pass those Vessels, and therefore must of necessity either seek a Passage by some other Place, or must be retained, and so produce this Suppression.

As to the other subject of Inhesion, most properly so called, it is the Vessels in the Womb, in the *Vagina*, or Neck of the Womb, that are obstructed, which especially are the lower branches of the Hypogastrick Artery, its Veins not excepted: for by Anatomy it is now evident, that the Hypogastrick Vessels are not carried to the Womb it self, but to its Neck on each side; And it is proved by this, because the *Menses* come after Women are with child. So I knew an honest Woman, who was very Plethorick, and had her *Menses* three Months always after she was with Child. There is a History of *Guillimeus* in *tr. de partu felici* c. 12. concerning a Woman, who eight days before her travail voided four or five Pints of Water, not by the Womb,

Womb, but by the Veffels of the *vagina uteri*.

Now we have given you the fubject of thefe Difeaſes, it remains that we give you the Symptoms; and the Difeaſe is eaſie, but the Cauſes are difficult, to be known. If therefore one would know, whether the Maſs of Blood, or the Veffels of the Womb be affected, he muſt obſerve, whether Maids or Women at certain times have any Symptoms, that ſhow the tendency of the Blood to the uterine Veffels? For inſtance, whether they feel any Pain in their Loins, Dulneſs in the whole Body, Swelling in their Belly, loſs of Appetite and Loathing, Fluſhes of Heat and Cold, difficulty of Breathing, a ſenſe of tenſion about the Genitals and the *Pubes*, Throbbings in divers Parts of the Body, in the *Hypochondria* and Limbs, rumbling in the Belly, Tendency of the Blood another way extraordinary, as by bleeding at the Noſe, Eyes, or Lungs? At this preſent I have a Maid nineteen years of Age, under Cure, who never had her *Menſes* by the Womb, but always by her Ears. Some every Month ſweat Blood. If ſeveral, though not all, of theſe Signs be preſent, it muſt be concluded, that the Veffels of the Womb are either obſtructed or too Strait and Small, and the Cure muſt be directed thither. It comes through ſome fault in the Blood, when Maids and Women, at the due time, find no ſenſe of Tenſion or Pulſation about their Genitals and Loyns, nor any of the forementioned Symptoms denoting it to be in the Genital Parts. The Blood is ſhown to be thick and Viſcid, by a Cooling, Moiſt, and Incraſſating Diet, preceding,

a Slow Pulſe, ſlowneſs in Motion; Tranſpiration hindred, Paleneſs, and Chilneſs of the whole Body. Phlegmatick humours are ſhown by frigidity in the Genital Parts, excretion of a Pituitous and Viſcid Humor by them, a little, rare and weak Pulſe, Sleepineſs, &c. There are ſeveral other Signs, that ſhow the Difeaſe is preſent; but without doubt the Patients own Confeſſion is the beſt and the infallible Sign. You may be aſſured of it, if Patients complain of a wearineſs all over their Body, of racking Pains about the Loins, if their Face be Livid or White, if they breath ſhort, eſpecially when they go up a Pair of Stairs, if their Eyes ſwell, if they be Penſive, and Lazy; ſometimes when they have loſt their Appetite they vomit and ſwoon. In a Diminution all things are more remiſs and fewer in Number.

§. 4. *Cauſe.*

NOW we proceed ſtrictly to inquire into the Cauſes; for when the Cauſe is once known and removed, the Difeaſe it ſelf may be known and removed. The *Saluſtus* in the ſtoppage of the *Menſes* blame a cold and dry intemperature of the Womb, an Inflammation or Scirrhus, or Compreſſion of it by the parts adjoining, or by a thick *Omentum*; they blame the thickneſs of the Womb, Ulcers and Scars left by them, or by tearing the *coryedones* in violent abortion; they ſay alſo the Veffels may be obſtructed by Cold and Groſs Humors. And Blood either too much or too little may occaſion it,

Among external Causes they reckon a cold and dry Air, going into cold Water, or tarrying too long there, especially when the *Menses* are at hand or actually present, Meat either excessive in quantity, or too Cold and Astringent, abuse of Spices, violent Exercise, too much Watching, Disturbance of Mind, &c.

§. 5.

Paracelsus in *param. l. 4. de origine morb. matricis*, and in several other places, talks much of the Nature and Office of the Womb; namely that it is a peculiar Microcosm in Man; yea, and like Man, it comprehends all the Creatures of the whole World in it self; it has proper Elements and Aliments, by which it is nourished, and the properties of Tartar; therefore he blames divers Tartareous Feculences lodged in the Womb.

§. 6.

Helmout says, the Menstruous Blood is separated by the hand of the *Archæus*, and so is cast out by nature: He says, disordered *Menstrua* discolour young Women.

§. 7.

Splivsus says, the cause of the stoppage of the *Menses* lies either in the Womb it self, or in the Vessels of the Womb: And he holds, that this evacuation does not proceed, when the passages or Vessels designed for this evacuation, are not open, when the Blood is not carried to the cavity of the Womb,

nor to them, or when these Vessels are stuffed with Viscid and Glutinous Phlegm.

For the remote Cause, he blames thick and melancholick Blood, the pensive Mind of young Women, their sedentary Life, long Sleeping, cold Food, a cold, thick, cloudy and moist Air. He says also, that at the time of Pubescence there is a natural apertion of these Vessels (which effect he ascribes to bilious Humors predominating in the Body at that time) and he distinguishes according to three degrees of Age. He attributes therefore the stoppage of the *Menses* to Phlegm and Phlegmatick Blood, which by its glutinosity stops the passages. I question not but the closing of the Womb is often the Cause of this Disease.

§. 8.

We distinguish the Causes of this Disease into Proximate and Remote. The Proximate in regard of their twofold subject are twofold. The first in respect of the Blood is its excessive thickness and viscosity, which invert the volatil temper of the Mass of Blood, hinder its Fluidity and Fermentation, render it unfit for Motion, hinder the breeding of Spirits, and obnubilate the Plactick Spirit; yet this Flux is often hindred by the Vessels either not being open enough, or totally obstructed. And the constitution of the Vessels is twofold, either so originally, or grown so in tract of time. Sometimes they are naturally so strait, that though the Blood would go that way; yet by reason of their smallness it cannot pass, whereupon it seeks a passage by some other inconvenient

inconvenient ways, to wit, by the Hemorrhoids, Nose, Eyes, Teeth, Ears, Lungs, or Sweat, as we knew an instance. In tract of time this obstruction of the Vessels is made by a certain Viscid and Mucilaginous Matter, which by degrees obstructs these Genital Vessels, and hinders that Flux.

These Vessels are stoppt sometimes by thick Pus, sometimes by Worms and Stones; or they are compressed by the Omentum, or too much Fat, by the Bladder, or the *intestinum rectum*, and such other parts, that are Swelled or out of their places, and by any Swelling of the Womb it self.

Among the remote Causes we reckon a weak Stomach, and the non-natural things, as contributors to it; such as a cold Air, cooling of the Hands or Feet by it, dipping them in cold Water, or sitting on a cold Stone, Food, that is Acid, Austere, Gross, Terrene, Watry, Phlegmatick and Viscid, or endued with an Astringent Quality. Cooling, Incrassating and Astringent Medicines, unseasonable or too much Sleep, an idle Life, Passions of the Mind, Excretions or Purgations, either increased, diminished or omitted; Swellings, or abscesses after abortion, difficult Travel, a Fall, Contusion, and Medicines used amiss.

§. 9. *Prognostick.*

THE obstruction of the *Menfes* is generally a Chronical Evil; and if it be not timely cured, altho at first it may not seem very dangerous, yet in progress of time it may prove the Cause of divers grievous Diseases, namely of the

Dropic, *leucophlegmaria*, Consumption, Inflammations, Ulcers, Suffocations, and other very dangerous Diseases. In Maids, this Disease does produce in some the Green Sickness, in others Palpitation of the Heart, in some Barrenness, in some a *Pica*, and in some a Dysentery. But this Disease is not so dangerous, when it arises, from external Causes, and in Summer or Spring time, as in Winter and Autumn: For the Blood sometimes destroys it self; and then either a Cachexy, Dropic or Consumption arises; this corrupt Blood acts most cruelly upon the Lungs, and either by eating or ulcerating, it opens their Vessels, and then degenerates into a Consumption.

§. 10. *Cure.*

NOW we will proceed to the Cure; and first according to the *Galenists*, who say, the Cure of this Disease must be varied, according to the variety of Causes. If therefore the Disease arise from excessive quantity of Blood, they abate it by Phlebotomy either in the Arm or Foot; as there is occasion, they commend Frictions, Ligatures and Cupping, with and without Scarification; then they order Semicupes made of Emollient and Laxative-Uterines; but they highly magnifie Natural, Sulphureous and Bituminous Baths both internally and externally, especially when the stoppage of the *Menfes* proceeds from a preposterous Motion of the Blood, and it is voided by the Nose or Mouth.

These things premised, they commend divers both Internal and External Aperients, and all uterine

O o o 2 Specificks,

Specificks, of which they have an infinite number.

§. 11.

Paracelsus highly commends the Specifick of an Ox's Spleen, reduced to a Magistery or Quintessence for provoking the *Menses*; he also magnifies *essentia solis*, which he calls *resina solis*. His Disciples magnifie the *Scoria* of *Regulus* of Antimony, and a tincture made thereof, *Arcanum Antimoni*, *Sal Philosophorum*, Oyl of Amber, Vitriol, and a thousand other things.

§. 12.

According to *Helmont's* Mind, the Medicines for the stopt *Menses* are the volatil Tincture of Coral, *sal chalybis*, and such like volatil things, got out of Specificks.

§. 13.

Splius, for a Tough and Viscid Humor, commends both Acids and Aromaticks, abounding with a lixivial Salt as well Fixt as Volatil, and Fixt and Volatil Salts themselves. He prefers Aromaticks above all things, whether they be bitter, or not; namely root of *Aristolochia rotunda*, *angelica*, Mather, Smallage, Fenil, Parsly, Eryngo, Lovage, *Iris* homebred and Florentine, Burnet, Schœnanth, Spikenard, &c. Leaves of Penny-Royal, Savine, Sage, Dittany, Majoran, Garden Rue, Wild Majoran, Mountain Calamint, Mugwort. Flowers of Rosemary, Wall-Flowers, Spikenard, Chamomil,

Saffron, &c. Berries of Juniper, and Bays. Most of the Carminative Seeds. Gum *Galbanum*, *Sagapenum*, Myrrh, &c. He commends the following Physick Wine;

Take of root of Elecampane two Drachms, Galangal, Turmeric each one Drachm, leaves of Penny-royal, Majoran, Savin, red Mugwort each half a handful, Bay-berries, seed of *Daucus*, Lovage each two Drachms, quilled Cinnamon three Drachms, Mace one Drachm. When they are cut and bruised, put them in a Bag. Put it in a Jug, and Pour a Quart of Wine to it. Let the Patient drink a glass at Dinner and Supper.

They that had rather have Pills, may take these following;

Take of Gum *Sagapenum* prepared with Vinegar half a Drachm, prepared Steel, white Amber prepared each one Scruple, red Myrrh, the best Castor each fifteen Grains, oriental Saffron half a Scruple, *Venice Borax* one Scruple, Oyl of Cloves six Drops. Mix them. Make forty Pills. Let the Patient take five every day before she go to Bed.

He extols all Volatil and Oily Salts, because they do their work kindly and successfully, and the Patient may conveniently take them at any time in Broth. Above all things he commends Spirit of Sal Ammoniack, about five Drops or more of it at a time. He says also, that all Sudorificks and Diureticks are proper here; in adult People

People he Bleeds, and rather in the Arm than the Foot. He also orders the external application of Aromatick Oyntments, such as *Unguentum Martiatum*, Oyl of Nard, Chamomil, Fomentations, Fumes, Steams, and the like.

In the Imminution of them he orders the use of the abovesaid Medicines; but in a less Dose.

§. 14.

NOW we will go to our own Cure, as it is founded on curative Indications. In the first place therefore let the first ways be rectified, then let the Mass of Blood, its Crudity and Thickness be corrected; if there be any obstruction of the Vessels, let it be removed, by taking away, dissolving, and inciding the viscosity of the Humors, that obstructs the Vessels, by exciting the Plastick Spirit, to which Specificks, and things that provoke the *Menfes* may be added.

That we may satisfie the first intention, it is requisite that the Stomach, which is full of acid Crudities and Humors, should be cleared; to this end Purgatives are good, which dissolve the Viscidity in the first ways, and remove obstructions of the Vessels: for instance;

Take of leaves of Penny-royal, Baum, Mugwort, Savine each half an handful, Vervein two Pugils, leaves of *Senna* one Ounce, root of Rhubarb three Drachms, *asarum* two Drachms, *costus* (which is a great provocative of the *Menfes*) five Drachms, seeds of Anise, Fenil each two Drachms, Filings of Steel one Ounce, Schoenanth one

Drachm, Bayberries No. vij, root of Zedoary, *calamus aromaticus* each half a Drachm. When they are shred and bruised, put them in a Bag, and pour some old Rhenish Wine to them. Let the Patient take three Ounces once or twice a day.

Or if a Powder be more acceptable;

Take of Powder of root of Jalap half a Scruple, *crocus Martis*, *saccharum aperitivum* each eight Grains, sulphurated Scammony six Grains, destilled Oyl of Cinnamon one Drop. Mix them for once taking. It must be given at the usual time, when the *Menfes* used to come naturally. Or,

Take of Water of Mugwort one Ounce, extract of black Hellebore six Grains, Steel half a Scruple, Scammony roasted four Grains, Syrup of Cinnamon three Drachms. Mix and give it. Or in form of Pills;

Take of *Pilula de hiera cum agarico* one Drachm, Vitriol of Mars moderately calcined one Scruple, Trochiscs of *Albandal* half a Scruple, extract of Saffron six Grains, Oyl of Penny-royal three Drops. Mix them and make Pills. The Dose is from nine Grains to fifteen. Or,

Take of Gum Ammoniack, *Sagapenum* each half a Scruple, Resin of Jalap seven Grains, Magistery of Amber four Grains, Volatil Salt of the same six Grains, destilled Oyl of Myrrh three Drops.

Drops. Mix them. Make eleven Pills.

If there be evident Signs, that a viscid Load lies in the Stomach, a Vomit must be given, especially if there be Co-indicants, and the Patient be easie to vomit, and it be Spring or Summer time.

After Purging, she may be bled in the Foot. Clysters made of proper ingredients are suitable to tender Constitutions.

Then, for dissolving the Viscidity of the Blood, Salts both Fixt and Volatil are proper; such as a Decoction of the Woods, and opening Roots, with proper Herbs. In this Case, I commend the constant use of Volatil Salts, adding Oily things. Or;

Take of Water of Penny-royal, Mugwort, Rosemary each two Ounces, *aqua vite mulierum* six Drachms, Spirit of Sal Ammoniack thirty Drops, Diaphoretick Antimony, prepared Crab's Eyes each half a Drachm, Oyl of Savine ten Drops, Syrup of Orange Peel one Ounce. Mix them.

Above all for a secret in these Cases, I commend Spirit of Sal Ammoniack aromatized, with Oyl of Orange Peel, Savine, Cinnamon, Penny-royal or Mace. Excepting this, there is not a quicker Medicine in this Case, than essence of Myrrh, made with the vinous Spirit of Sal Ammoniack; or, a more compound Medicine, *elixir proprietatis volatile*, concerning which I must acknowledge, I have ever found it successful. Myrrhated, succinated and Martial Medicines

often do the business, especially Iron Spaw Waters. Therefore Filings of Steel prepared may be put in the ordinary Drink;

Take of Trochiscs of Myrrh half a Drachm, Venice Borax twelve Grains, the best Castor, Alexandrian Mummy each half a Scruple, Oyl of Savine eight Grains. Mix them. Make a Powder. Divide it into five Doses. Or,

Take of Filings of Steel, Powder of Nutmeg, Cloves, the best Saffron each one Scruple, Oyl of Caraway six Drops. Mix them. Divide it into four equal parts. Or,

Take of Humane Secundine prepared, Castor prepared, Oyl of Amber six Grains. Mix them for three Doses, half a Scruple in each.

The Tincture also or Spirit of Humane Secundine, with a few drops of Tincture of Aloes and Spirit of Sal Ammoniack given in some convenient liquor is wonderfully commended in this case. Decoctions of Savine, Motherwort, Dittany and such things are good.

The following Hamagogue Water is approved by much experience;

Take of the root of both the *Aristolochia*, Mather, *cassia lignea*, each half an Ounce, leaves of Savine, Penny-Royal, Bayes, Vervein, Flowers of Marigold, Wall-Flower each half an handful, *crocus Martis aperiens* two Drachms, *species diarrhodon Abbat* one Drachm, Trochiscs of Myrrh

Myrrh a Drachm and an half,
fæcula bryoniae half a Drachm,
 Saffron of *Austria* one Drachm,
Sal Sulphuris five Drachms, Salt
 of Mugwort one Scruple. Shred
 and infuse them eight days in
 Water of Penny-royal, Mercury
 each half a Pint, Sack one Pint.
 Afterwards destil them accord-
 ing to Art.

I have seen several young Wo-
 men cured by it alone. Castor and
 Aloetick Medicines are often suffici-
 ent. In this Case *elixir uterinum*
Crollii, *elixir proprietatis*, &c. are
 proper. And so *Spiritus vitrioli*
Martis is a singular Specifick in
 this. The following Decoction
 of an Ox's Spleen is highly set
 by;

Take the Spleen of an Ox, of leaves
 of Baum, Mercury, Penny-royal,
 Nep each one handful, Flowers
 of Marigold, Wall-Flower each
 two Pugils, root of *Aristolochia*
rotunda, Bryony each one Ounce,
 Bay-berries three Drachms, *cassia*
lignea two Ounces. Infuse them
 in a sufficient quantity of Baum,
 Mugwort and Penny-royal water,
 let them infuse a while in *balneo*
Mariae, afterwards boyl them
 in *vase clauso duplicato*. Let
 the Colature be sweetned with
 Syrup of Mugwort and Cinna-
 mon each a like quantity, what
 is sufficient. If you have a Mind
 to sharpen it, you may do it with
tinctura Martis Zwelferi.

When the *Menfes* are stoppt by
 external Cold, and a clotting of the
 Blood arising from thence, it will
 be proper to give Antimony with
 Castor, adding some *sperma ceti*,

especially if a Pleurisy be joynd
 therewithal, as sometimes I have
 known it.

The following Pills are not of
 contemptible use.

Take of Aloes one Ounce, resinous
 red Myrrh, extract of Gentian,
Aristolochia, Dittany, Saffron
 each half an Ounce, Mather, Mi-
 thridate each one Drachm. Mix
 them up with Syrup of Mugwort
 into Pills. The Dose is five,
 seven, or more, to be taken every
 day, Morning and Afternoon in
 warm Beer.

All things likewise that imbi-
 be an Acid are proper in this Case: for
 when the Acid is imbibed, and
 changed into a third Salt, the Pec-
 cant matter may properly be eva-
 cuated by the Urinary or other
 passages: for instance;

Take of red Coral prepared, Crabs
 Eyes prepared each half a Scruple,
crocus Martis aperitivus five
 Grains. Mix and give it.

But if the Blood flow some other
 extraordinary ways, then it must
 be averted, and the obstructed
 Vessels of the Womb must be open-
 ed; which you may do by Volatil
 Medicines, Baths, and such like
 means.

In General therefore, as we said
 before, all Salts are proper, Fixt
 as well as Volatil; yet you must
 take this Caution, That Volatil Salts
 and such things must be given,
 when the *Menfes* are present, but
 fixt Salts, made out of appropriate
 Herbs, must be given before
 their coming. These are Spe-
 cificks, Mugwort, Penny-royal,

Wall Flowers, root of *Aristolochia rotunda*, Cinnamon, Myrrh, and Trochiscs of it, Castor, Saffron, Borax: for instance;

Take of Borax one Scruple, quilled Cinnamon powdered half a Scruple. Mix them.

Savine and its Oyl deserve great commendations. The following Volatil Spirits are of great use, to wit, *Spiritus Salis Ammoniaci aromatizatus*, Spirit of Harts-horn, Soot, Secundine, *liquor cornu cervi succinatus, tinctura salutaris, Castorei, elixir proprietatis*, especially with a Volatil Alkali, *essentia ad Menses aurea* of our description.

This must be observed in general, that there is no sort of remedy, that has the same virtue in all People. Wherefore unless the virtue in all Medicines be duly observed, and the passive subject be compared with the active object, we shall not always obtain our desired end. In exceeding pertinacious Obstructions of the *Menses* the Itomachick Salt, made of the dead Stone of Spirit of Sal Ammoniack with Salt of Tartar may be conveniently used with ones Meat.

If there be an *Anasarca*, which is apt to attend this Disease, then this following will be proper;

Take of root of *Asarum*, Mather each one Ounce, leaves of Savine one handful, Juniper-Berries two Drachms. Boyl them in a sufficient quantity of Common-Water, adding towards the latter end, of Cinnamon two Drachms, Cardamom one Drachm. Add to the Colature of Spirit of Earth-

worms three Drachms. Mix them.

Let the Drink be Elecampane Beer or Wine. In this case Purgatives mixt with Hæmagogues will be proper. The following Physick-Ale or Wine will be good;

Take of root of *Angelica*, Lovage each half an Ounce, Galangal two Drachms, leaves of Rosemary, Motherwort, leaves of Savine each one handful, Bay-Berries one Ounce, Cinnamon three Drachms, Saffron one Drachm, Salt of Tartar two Drachms. Mix them for a bag.

A Decoction of Rosemary, and Wall-Flowers is very good.

If there be the Green-Sickness and a Cachexy, you may joyn Anticacchecticks with Uterines;

Take of *pulvis cachecticus Hartmanni* half an Ounce, Goose Dung two Drachms. Mix them, for several Doses.

In difficulty of the *Menses* this following is proper;

Take of Water of Penny-royal two Ounces, Mugwort half an Ounce, essence of Castor a Drachm and an half, Spirit of Sal Ammoniack half a Drachm, distilled Oyl of Aniseed three Drops, Syrup of Mugwort six Drachms. Mix them for once taking. Or,

Take

Take of Water of Fenil, Pennyroyal each one Ounce, *aqua carminativa* two Drachms, tincture of Tartar one Drachm, *liquor cornu cervi succinatus* one Scruple, Syrup of Mugwort half an Ounce. Mix them. Or give fifteen Drops of essence of Saffron.

If there be Pain and Convulsions, give this following;

Take of *elixir proprietatis Paracelsi*, tincture of *Opium* each one Drachm. Mix them. Or,

Take of Essence of an Ox's Spleen, Mugwort, Baum, *Mari liquatus* each two Drachms, Savine a Drachm and an half, Saffron one Drachm. Mix them. The Dose from fifty to threescore Grains.

Externals joyned with these Internals are extolled, as having singular effect. Excellent Externals may be made of the *Scorie* of *Regulus* of Antimony: for instance;

Take of the *Scorie* of *Regulus* of Antimony four Ounces. Boyl them in a sufficient quantity of a *lixivium* made of Mugwort or other Specifick Herbs, to the extraction of the redness. To fix Ounces of the Colature add of Sack two Ounces. Mix them. Let two Ounces of this Liquor be poured upon red hot Stones or Iron, and let Women in desperate Cases, receive the Fume by a Funnel.

Fumes may also be made of Savine, Coloquintida, Myrrh, *Styrax*; and such like things.

Glauber's instrument is deservedly extolled, which by means of a Sponge communicates volatil Salts, especially Sal Ammoniack, joyned with any Alkalifate, to the Womb of a Married Woman. They that have not this instrument, may take a Viol, and pour some volatil Spirit into it: for instance, *Spiritus Salis Ammoniaci volatilis* & *aromatizatus*, and putting a linen Cloth about the Mouth of the Viol, they may apply it to the *sinus pudoris*, the Body of the Viol may rest upon Coals: by thus doing the viscid *Mucus* is dissolved, and the Plastick Spirit is excited.

Baths also, and Fomentations, may be made of Uterine Herbs, for the same purpose;

Take of leaves of Mugwort, Pennyroyal, Motherwort, Mercury each two handfuls, Rosemary one handful, Wall-Flowers, and Flowers of Mallows each half an handful, Bay-Berries one Ounce and an half, root of Bryony two Ounces, *aristolochia rotunda*, Mather each one Ounce. Cut and bruise them Grossly, and boyl them for a Bath. But natural, sulphureous and bituminous Baths, are to be preferred before Artificial ones.

If you desire a Liniment, here follows one;

Take of Oyl of white Lilies, Wall-Flowers each three Drachms, *Diacolocynthidos* one Drachm and an half. Mix them.

So likewise Pessaries may be applied in obstructions of the *Menses*. *Mynsicht's* are the best. *Angelus Sala*

Sala wonderfully commends black Hellebore, but because it must be kept a long time, it is to be feared an exulceration may arise. So this following is accounted as a certain experiment;

Take of the Powder of Leaves of Spotted Armaria, gathered when the Sun is in *Leo*, and dried in the Shade half a Drachm, root of black Hellebore prepared one Scruple, with a sufficient quantity of Gum Tragacanth dissolved in white Wine make a Pessary.

But the obstruction, that has its rise from peculiar Diseases of the Womb or its Vessels, or from Diseases of the ways, the falling down of the Womb, imperforation, and other such like things, its Cure must be sought for somewhere else; and Menagogues must ever be added to these Medicines.

In the Imminution of the *Menses* the same Medicines in a manner will do, but in a less Dose. In discolouring of the *Menses*, by Putrefaction, *elixir proprietatis*, with *elixir uterinum Crollii* is proper. Also essence of Mugwort, Baum, &c. is good. *Mercurius dulcis* is a generous Medicine in this Case;

Take of essence of Baum three Drachms, *elixir proprietatis* half an Ounce. Mix them. The Dose is between Fifty and Threescore Drops. Or the following bag;

Take of leaves of *Scordium*, Baum, lesser Centaury each one handful, root of Bryony one Ounce, black Hellebore prepared half an Ounce, leaves of *Senna* nine

Drachms and an half, large Cloves one Drachm, *Sal uterinum* one Drachm. Make a bag for three Pints of Wine.

These things premised, Sudorifics must not be neglected.

In a disorderly Flux of the *Menses* all the forementioned things in a manner are proper, especially things that purify the Blood and correct its Acrimony and Viscidity; such as artificial Spaw's according to *Kesler's* and *Schroder's* Opinion; but natural Martial ones do far exceed them.

§. 15.

NOW we will see a few Empirical Medicines. *Johannes Agricola* commends the following Pills as a singular secret in the Suppression of the *Menses*;

Take of extract of Bay-berries, Savine, Centaury the less, Mari-golds each one Ounce, Salt of Baum, Savine each half an Ounce, Oyl of Savine half an Ounce, true borax, Saffron each one Ounce and an half. Make a Mass with Oyl of Cinnamon. Give a Scruple of it Morning and Evening.

He also extols white Flowers of Sulphur.

Thomas Bartholinus commends the Decoction of Pomegranate Pills; *Borellus*, Horehound; *Forestus*, *semen nigella*; *Glauberus*, concentrated Spirit of Urine; *Johannes Ferdinandus*, ashes of Pigeon's Dung calcined with half a Scruple of Powder of Saffron.

Jacobus

Jacobus Lusitanus magnifies Iron Oar; of which we also use the tincture.

Antonius Mizaldus commends the drinking of Rue, boyled in Wine with Hyfop and Anife.

Simon Paulli cries up a Decoction of Motherwort and Chamomil, with a little Mugwort.

Prævotius values an Onion stuck round with the jaggs of black Hellebore roots, casting away the root, and eating the Onion several times Fasting, when the *Menses* are near. He has also for a secret, Amber, and Garden Daifie boyled in white Wine.

Ronsæus in this Case highly commends distilled Oyl of Serinountain.

Jobannes Schroderus cries up the following Decoction for an *Arca-num* in provoking the *Menses*;

Take of seed of Millet, Anife, Mistleoe of the Oak each three Drachms, root of dittany one Drachm, Saffron one Scruple. Steep them a little in white Wine, and then boyl them gently. The Dose four Ounces.

Timæus a Guldenglee, when other remedies will do no good, commends applications to the Navil of Trochifces of *Albandal*, and he commends a fume of Savine and Coloquintida.

Benedictus Faventinus affirms, that the following Pill put into the Womb does good, upon his experience;

Take of Venice-Treacle one Drachm, Powder of Savine one Scruple. Mix them.

CHAP.

C H A P. IV.

Of the excessive Flux of the Menfes, and the Whites.

§. 1.

THE immoderate Flux of the *Menfes* is of two sorts.
 1. When the *Menfes* Flow in an excessive quantity and too long.
 2. When they return sooner than they should. It is generally described to be, *An excretion of too much Blood by the Womb, caused by the opening of the Vessels thereof.*

The Whites are called in Latin *Fluor Muliebris, Fluxus albus, Menstrua Alba, Gonorrhœa non virulenta, coryza uteri, &c.* for a *Gonorrhœa* does not differ much from the Whites, and sometimes they are complicated. It is commonly described to be a plentiful and frequent excretion of a Phlegmatick, thick Humor, sometimes White, sometimes of another Colour, without Pain, by the Womb: Or rather, an excretion of an abounding inguinal humor by the vaginal Glands of the Womb.

Some are mistaken in calling this Disease the *Menstrua alba*: for
 1. It does not come every Month, neither sooner nor later, as the *Menstrua* do, 2. The Whites last

the whole time from their first coming till they quite cease. 3. The Whites are observed to come before and after the time of the *Menstrua*. For no Age, the first excepted, (and yet I have a Girl not ten years Old now under my Cure for this Disease) is exempt from this Malady. All which things considered show, that the Whites have nothing to do with the *Menstrua*; though just before the *Menfes* come, they are often in most abundance, by reason much of that Matter is at that time gathered about the cervical Glands of the Womb.

§. 2. Difference.

THE Whites differ according to the violence of the Symptoms. They continue sometimes a Month, or Months, yea, or years, without any great harm, or grievous Symptoms. Hence the great *Platerus* calls them Moderate and Immoderate. And the same may be said of the excessive Flux of the *Menfes*.

§. 3. Signs

§. 3. Signs of excessive Menfes.

AND as these Diseases are easily seen, so their Causes may as easily be discerned by their Signs. For a *Pletthora* has its Signs. And as for the Bloods Thinness and Acrimony, and exorbitant Motion, the Blood voided, Pain or no Pain in voiding of it, heat and the like, do show them. An *Anastomosis* is preceded by Causes apt to produce it, excessive Heat, Venery, hard Travail, Miscarriage, a previous Suppression of the *Menfes*, &c. A *Diæresis* by Pain and Heat about the Neck of the Womb, Pain in Voiding the Blood, and alteration in its Colour, by the *juvantia* and *nocentia*, excoriation or inflammation in the Parts, by which the Blood passes. Such Patients are afflicted with tirefomeness, languishing all over their Body, Paleness of Face, loss of Appetite, Heat, Thirst, Pain in their Loins, Swellings in their Feet, and a thousand such things.

§. 4. Signs of the Whites.

THE Whites also need no Signs, as being easy to be known by the relation of the Patient and By-standers. They may partly be known by the Urine, in which one may observe a Sediment Whiter and Cruder than ordinary, Phlegmatick and without Smell, or one may see a sort of Phlegmatick and White Streaks: And partly by the concomitant Symptoms, Pain

in the Back and about the Belly, Palpitation of the Heart, Atrophy, Dulness in the whole Body, and loss of Colour. The Whites indeed, when *Moderate*, are attended with no grievous Symptoms; but *Immoderate*, both as to the quantity of matter, and the pertinacy of both Causes are attended. 1. With loss of Strength. 2. A Cachexy. 3. A Numbness in the Hands and Feet, and Barrenness. And the excrementitious Humors are sometimes White, sometimes Puitous like Whey, sometimes Pale or Yellow, sometimes Green, according to the diversity of the ferous Liquor.

§. 5. Cause of the excessive Menfes.

ACCORDING to the *Galenicists* the Causes of an immoderate Flux of the *Menfes* are an *Anastomosis*, *Diapedesis*, *Diæresis*, and *Diabrosis*, which are caused by the excessive quantity, Heat, Thinness, or Acrimony of the Blood, by a Blow, a Fall, or a Wound.

§. 6. Cause of the Whites.

IN the Whites they say, the Brain, Stomach, Liver, Spleen, and Mesentery, send their excrements to the Womb, as to the weaker Part, and therefore most apt for reception: nor do they doubt, but excrementitious Humors may be bred in the Womb it self, through the weakness either of the retentive or concoctive Faculty. Therefore they blame the Intemperature and weakness of the Womb, which is often contracted

contracted while they are with Child, from their Travail, Abortion, Contufion, Inflammation, Abfcefes, or Exulceration.

§. 7.

Paracelfus l. 11. §. de dolorib. *matricis*, makes the Difcafes of the Womb, to be of a quite different Nature.

§. 1.

HE fays, "The breeding of Difcafes of the Womb, is not in the Womb, nor from it. Becaufe every Part, that depends upon others, receives detriment from other Parts. For the Difcafes of the Womb are Retention and Superfluity. According to him, the Womb receives its nutriment from all the Parts once every four Weeks: then it cafts out its excrements, and then Women feel Pains in their Back and Head, and Compreffion at the Pit of their Stomach. The Retention is not in the Womb, but from all the Parts of the Body. He Proceeds §. 2. "For the Menstruum in the Womb is not the Menstruum, but the Excrement of the Menstruum. And therefore tr. 2. de gen. hom. he calls it *Menstrua ejection* and *stercus matricis*. "Then there enfues a conjunction of thefe (fince the Menstruum comes from all the Parts, and some Parts are Morbid) Destructive, Alteration, Confufion, Mixture of a Good and Bad thing, difcolouring and the like. When a Woman finds Pain, there is Oppilation and an excessive Flux.

§. 8. Cause of the excessive Menstrua.

According to Sydenham his judgment, the Menstrua exceed through some fault either in the Blood, the Womb or its Vessels. Through the fault of the Blood, as often as it is too thin or too sharp, especially at the time of the Menstrua. And the Blood is made so by the Heat of the Air, Sun, Fire, Bath, &c. also by too Spirituous and Aromatick Food, by the Passions of the Mind, as Anger; also by excessive Motion of the Body, Running, Dancing, Rubbing, &c. by over long Watching, by the usual evacuations of Bile, being either omitted or quite stopt. He fays, it is through some fault in the Womb, or its Vessels, when they are either too Lax, or Moist, through abuse of watry things, eating too much horary Fruit, Peaches, Grapes, &c. especially when the Menfes are at hand, because at that time all about the Womb is open.

§. 9. Cause of the Whites.

AS for the Cause of the Whites, when Moderate, and often continuing a long time without any considerable damage, he makes the efficient Cause to be some Acid-Austere Ferment produced in the Womb, but the Mass of Blood is not very much changed. He likewise makes the efficient Cause of the immoderate Whites to be the same, but acting (according as divers Symptoms are raised) diversly, and the

the material Cause is the Mass of Blood vitiated divers ways; yet he holds, that the Whites may be produced, without any such uterine Ferment, if so be Pituitous Humors abound in the whole Body, and be sent thence to the Womb, and so cast out of the Body. Our Author thinks, that in this Disease the Womb is affected in a twofold manner, to wit, mediately, the Glands, especially the Pancreatick, being primarily affected, which send the Acid to the Womb: Secondly immediately, these Glands not being hurt; if namely the Womb have taken Cold externally.

Therefore he holds, that the primary Cause of the Whites, must always be sought in the Womb; but the secondary Cause, and that which encreases it, in the Blood, and other bad Humours blended with the Blood, and with it tending to the Womb: And he proves that the Whites can neither proceed from Seed, nor from Spirits. He concludes therefore, that the Cause is the Blood, and the more viscous or serous the Whites are, the more viscous or serous the Blood then is, according to the diversity whereof there appears a diverse colour in the *excreta*. And he derives it from an acid Acrimony, which turns the Blood into something like Pus.

Among the antecedent Causes, he in the first place reckons excessive and long protracted grief of Mind, which is a great breeder of a noxious Acid, but especially of an Austere. Of which Acid and Austere in Women, he says, an unexpected Fright is a most certain Cause. He reckons up Cold, the abuse of Acids, and when the Womb is immediately

affected by the external Cold, so that according as it is disposed to the Whites, so Women are more or less apt to catch this Disease. He says, that in the Whites the Womb is so vitiated, that the Blood in it is corrupted, which according to the Variety of the Fault in the Womb, Varies much in regard of Colour, Smell, and Quantity. And he holds, that as the uterine Ferment is more or less Acid, Austere, or Sharp, or any other way Vitious, so it will in a different manner corrupt the Blood, that is carried to the Womb.

So likewise the Blood being diversly affected by other Diseases being or having been in the Body, will be corrupted into a different Humor by the same Ferment. So that, according to him, the diversity of the Humor in the Whites, depends sometimes upon the diversity of the corrupting Ferment, sometimes upon the diversity of the corrupted Blood, and sometimes upon both.

§. 10.

HAVING already considered other Mens Opinions, we will now give you *our own* concerning the Causes of these Diseases. And the Cause of them both must depend upon the Blood's being too abundant, too thin or sharp; or upon the Vessels which suffer either an *Anastomosis*, a *Diuresis*, or (which is very rare) a *Diapedesis*; or externals, to wit, an over hot and thin Air, Food or Physick, that is Hot, Inciding and Attenuating, or Menagogues, or things that open the Orifices of the Vessels, especially sharp, cutting, pungent Particles, excessive

excessive Watching, over much Exercise of the Body or the Parts of it, Riding, Running, Dancing, Playing at Ball, or at any other Play, sudden Passions of the Mind, Fright, Anger, various Excretions of Blood suppressed, Misfortune by a Blow, Fall, Wound, Ulcer, and the like. For according to Nature Women find a turgescence of Blood at the time of Menstruation; they have a Pain in their Back, a Throbbing and Racking in their Loins, a Weariness and Dulness in their Limbs, Head-ach, an Inflation of the *Hypochondria*, and then comes the excretion of Blood by the *Anastomosis* of the uterine Arteries. And we question not but a too great laxity of the Pores may be the Cause of this Disease, which is usually caused by divers moist things.

§. II. Cause of the Whites.

W^e think, that the Cause of the Whites, is a vitious *Serum*, corrupted in the vaginal Glands, sometimes Purulent, but often Serous, flowing out of the Glands of the Womb. *D. Mich. Bernhard Valentinus*, one of the College of the Curious, and our Friend, discourses excellently well of this subject in a Learned Epistle, *de nova Matricis & Morborum Muliebrum Anatome*, saying, "The last and worst corruption of the seminal Liquor is in the Disease, they call Womens Whites, which is proper to these Glands, and is indeed nothing else but a *coryza Uteri*, proceeding from a continual abscess, and most Fetid Corruption in the vaginal

Glands. He proceeds, "For the morbid Tyrant, is a putrid Thief in the glandulous Parts, which, defrauding not only the adjoining, but all the Parts of the Body of their nourishment, precipitates it into a putrid Liquor. This is shown by the iteems of the Body, hollow-ness of Eyes, and Cheeks, unusual lameness of the Limbs, which is obvious even to Women. Hence it is, that a kind of Cachexy accompanies this Disease, in as much as the *Viscera* being defrauded of their nutriment do flag, and their vital Ferments decay exceedingly, especially the Stomach, which wanting both Fuel and Fire, knows neither how to select nor volatilise the Meat; but turns it into a putrid Mucilage, which being no way corrected, gets where it can, into the Veins, and is nothing but an useless load. At Limburg I opened a Woman forty years of Age, that died of this Disease, and found the Glands of her Womb swelled and hard, about the bigness of Pease. Here also sometimes, Chyle may be voided, namely, when the Pores of the Arteries are so open, that Chyle can pass through them. And thus we have seen true Purulent Matter, voided from an Ulcer in the Womb. We, as well as other Physicians, do hold, that this Disease may arise from too much Thinness and Acrimony of Serum.

We blame in this Disease, not the obstruction, but the over Laxity of the Pores and Glands, when Pituitous, Serous, and Sharp Humors gather thereabout.

§. 12. *Prognostick of the excessive Menfes.*

AS to the Prognostick of the immoderate *Menfes*, we must observe, that all immoderate excretion of them, if not of it self, yet at least by accident, is dangerous, especially in elderly People, and if it continue long, for besides that it wasts the strength, it is the cause of divers Diseases, to wit, of a Dropsie, *Anasarca*, *Leucophlegmatia*, Cachexy, straitness of Pores both in the whole Body, and especially in the Womb, of Inflammation, Exulceration, &c. and of other Diseases.

It also threatens an Atrophy, because when the Blood is diminished, it has not force enough in it, so as that the Particles fit, for nourishment, may be thrust forward strong enough to stick to the Parts, that should be nourished.

Hither belong the following Aphorisms of *Hippocrates*;

Señ. 5. Aph. 32. { A Woman that Vomits Blood is cured when her *Menfes* come.

—5—36. { A Womans *Menfes* discoloured, and not coming always in the same manner, do indicate that Purgings is necessary.

—5—39. { If a Woman, who is neither with Child, nor lies in, have Milk, her *Menfes* have left her.

—5—50. { If you have a Mind to stop a Womans *Menfes*, clap a large Cupping-Glass to her Breasts.

—5—57. { When the *Menfes* abound, Diseases do happen; and when they stop, Diseases proceed from the Womb.

—5—61. { If a Woman's Purgations do not come, and neither Chilness, nor a Fever follow, and if she loath her Meat, you may reckon her with Child.

—6—29. { A Woman is not troubled with the Gout, unless her *Menfes* have left her.

When this Flux lasts a pretty while, it may be feared it will last a long time, because the Part is accustomed to the Flux.

This Disease is easily cured in young Women, but not so in the Elder sort, because here the Fibres, of the Arteries and Veins are solid and callous, and are not so capable of Astriction, yea, oftentimes the Disease proves incurable.

§. 13. *Prognostick of the Whites.*

BUT as for the Prognostick of the Whites, it is a more lasting Ail, especially in old Women, Cachectick, such as have had their *Menses* long stopt, or quite gone, in Maids or Widows, that are troubled with the Green Sicknes, or such as have had some tedious and grievous Disease of the Womb, and whose cervical Glands are hardened or any other way hurt; for in old Women this Disease is not so easily cured, because in them the Fibres are more immoveable, and when the Pores of the Glands are once detorted, they constantly remain so, nor are they easily reduced to their pristine Figure.

Yet it has little danger in it, unless it prove of long continuance, and be very grievous in regard either of it self, or of the Cause whereby it is produced. For then indeed it occasions some grievous and very dangerous Diseases.

§. 14. *Dietetick Cure.*

AS for the Cure of the immoderate Flux of the *Menses*; we think, the same must be insisted on here, as in other excretions of Blood, which has been declared before: For this differs but very little from the Cure of other Hemorrhages.

But in the Whites let the Patient use a serene and warm Air, at least let her avoid Rain and Cold. The Food must be contrary to the peccant Humour; and above all things let them forbear Acids, those Ene-

mies to the Serum and Glands: Hence we observe in Holland, that this Disease is very frequent, because Women at the Table eat Salads immoderately. The Food must also be of easie Fermentation and good Juice: Sometimes it will not be amiss to miss Supper. Drink but little. The Motion of the Body and Exercise must be Moderate. Sleep and Rest must not exceed their bounds, because all excess is bad: for as idleness makes the Body Sluggish, so

Attenuant juvenum vigilata corpora noctes.

All Passions of the Mind, especially Grief, which may encrease this Disease, must be avoided, and agreeable ones must be moderately exercised. The excreta and retenta must ordinarily correspond, especially to the quantity of what is taken.

§. 15. *Pharmaceutick Cure.*

THE Pharmaceutick Cure of the immoderate *Menses*, according to the *Galentists*, is the same, which was proposed for the immoderate Flux of the Hemorrhoids. For first of all, for Revolutions sake, they bleed in the Arm; and in this Case they will have a great Quantity of Blood taken away; they commend trictions also, Ligatures, and Cupping Glasses. To carry off the Bilious and Serous Humors, that abound in the Body, they prescribe Purges twice or thrice a Week; they also sometimes allow of gentle Vomits, inasmuch

as they frequently make Revulsion. Afterwards they give divers Juleps, Powders, Electuaries, Pills, and other Incrassating and Altringent Medicines proposed in the said Cure, adding, if there be occasion, Opiates. *Reverius* highly extols this following;

Take the shells of two new laid Eggs burnt, of Frankincense, Maltich each half an Ounce, Perl prepared, red Coral prepared, Amber each two Drachms, Bloodstone, Emerald prepared each half a Scruple, Barly-Flour two Pugils, ten Whites of Eggs. And, if there be occasion, add a little Chalybeate-Water, and make two Cakes, which must be baked in an Oven, till they may be Powdered. The Dose is half a Drachm, or a Drachm with Sheep's Feet Broth, early in the Morning.

You may find more of the Ancients among the empirical Medicines.

§. 16.

Paracelsus cured a certain Woman, who had had this Flux of Blood with Fainting a long time, by giving her Oyl of Vitriol in Plantain Water, and a Drachm of Cornellion. He also commends tincture of Corals, which is made with a Pumice;

Take of Coral half an Ounce, Oyl of Myrtles one Drachm, *Olibanum* one Ounce, melted Salt two Ounces. When they are mixt, Calcine them in the fourth Degree of a Reverberatory for twelve hours, or more. Then

make an Ablution with Plantain Water.

Crollius, his Disciple, commends the Electuary of *landanum* in voiding of Blood, and excessive evacuation of the *Menses*, with *crocus Martis*, and red Coral.

§. 17. Cure of the excessive Menses.

SPlotus Cures the Menstruous Flux produced by an over thin, Sharp and Serous Blood, by abtaining from all Non-natural things, that corrupt the Blood, or at least by moderating them, especially, when the time of the *Menses* is near, by keeping from all Heat, Spirituous and Aromatick Food, generous Wine, and chiefly its Spirit, from Anger, violent and long motion of the Body. He commends divers Emulsions made of Almonds and white Poppy Seeds, Opiates also are good. For evacuation of Bile, he commends Tamarinds, which also thicken the Blood; as all Austere and Bitter things, commonly called Altringents, do. Such are the expressed or inspissated Juices of moist unripe Fruits, Verjuice, *Acacia*, &c. And if there be much Serum lodged in the Blood, he judges it should be evacuated by Hyaragogues, given a few days before the time of the *Menstrua*, if the strength will bear it. But if an over lax Constitution of the Womb be the Cause, care must be taken to avoid all external nocent Causes, and to amend the damage received, and the too great laxity in the Womb: for which purpose Altringents are good, which may be

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given

given in form either of a Powder, or Pills, Electuary, or Mixture, or in what other form may be most acceptable to the Patient, so that she may persevere some time in the use of them. He also commends a fume of Maltich, Frankincense, and red Roses. He likewise approves of Fomentations made of divers Astringent Roots and Herbs boyled in red Wine, and applied outwardly.

§. 18. Cure of the Whites.

THESE things premised, our next work is to treat of the Cure of the Whites, according to Syblius his way, which he says must be varied according to the diversity of the Cause. If therefore the ferment of the Womb be Acid, the primary Cure of the Whites will consist in the amendment of this vitious Ferment, and the Secondary in the correction of the whole Blood. Therefore the preceding Causes must be taken care of, such as Cold, grief of Mind, Fright, Abuse of Acids, &c. Then the Acido-Austere and sometimes sharp Ferment, may very well be corrected by pure volatil Salts, such as Spirit of Sal Ammoniack; and temperate oleous things are very useful in amending a sharp Acid. And for correcting the tainted Blood, which is peculiarly corrupt, and occasions the Whites, or sometimes makes them worse, he says, divers both Alteratives and Evacuaters must be used according to the Variety of the Cachexy.

§. 19.

HAVING done with others, it remains that we give you our own Cure, founded upon right intentions. The Cure of the excessive *Menstrua*, differs very little from the Cure of other Hemorrhages: Since External or Topical Medicines must in this Case, be only applied to the Womb, as to the Part affected.

The Blood therefore, and the enraged Uterine Spirits, must first of all be quieted, which may easily be attained by giving gentle Incrassating and Altringent Uterines; and, if there be a *Plethora*, by bleeding in the Arm; and, if Serous or Bilious Humors abound, by giving gentle Purges of Tamarinds and Rhubarb, which we commend in the ordinary Drink, *Elect. Passular. Tamarind*, &c. Then we must fall to Incrassating; for which purpose all Earthy Glutinous things are good: for instance the following Electuary is excellent;

Take of old conserve of red Roses one Ounce and an half, root of Comfrey half an Ounce, Pulp of Quinces preserved three Drachms, *confectio de hyacyntho*, red Coral prepared each one Drachm, Amber prepared, Ivory prepared each half a Drachm, *pulvis spermiolæ compositus* one Scruple, Syrup of Quinces, Myrtles each what is sufficient, make an Electuary according to art. Or,

Take of red Coral prepared, Blood-Stone prepared, Bole Armenick, true Unicorn's Horn, Seed of Plantain each three Drachms, Crude

Crude Gold two Scruples, *Laudanum Opiatum* five Grains Mix them, with Syrup of Plantain or Myrtles what is sufficient. Make an Electuary.

Oyl also destilled off Bole Armenick is excellent in stopping the *Menfes*. Or,

Take of *Diafcoridium* half an Ounce, red Roses one Ounce, Dragon's Blood half a Drachm, Powder of white Henbane seed two Scruples, Man's bones calcined, *trochisci de terra sigillata*, *vitriolum Martis* each one Scruple. With Marmalade of Quinces what is sufficient, make an Electuary. Let the Patient take the Quantity of a Filberd or a Chestnut at once.

Things highly valued in this Case are tincture of Corals, tincture of Sulphur, *tinctura antiphthifica*, tincture of Vitriol, tincture of Bloodstone, *tinctura Martis astringens*, *sperniola Crollii*, *species diarmaris*, *diplantaginis Mynsichti*, *pilula styptica ejusdem*, Essence of Mummy; but in this Case *Mixtura styptica Sylvii* is above them all. In lean Persons, where the Humors are over sharp, a Diet of Goat's or Asses Milk is excellent. In extremities we must have recourse to Anodynes for instance;

Take of red Coral prepared, Yellow Amber, Bole Armenick, Dragon's Blood each two Drachms, Seed of Plantain one Drachm and an half, *Laudanum Opiatum* three Grains, *extraflum croci Martis* one Scruple, Syrup of dried Roses what is

sufficient. Make an Electuary according to art.

If Arterious Blood come, Water of a Stag's Heart, and of the Velvet Head of a Stag is admirable, and now and then this, or some such Potion may be given, adding some Opiates, which do the whole business.

Take of Water of the Velvet Head of a Stag, Shepherd's-Purse each one Ounce, *Laudanum Opiatum* one Grain, Moss of Man's Skull six Grains, Syrup of Coral half an Ounce. Mix them for once taking. Or,

Take of Water of Plantain, Purslain, *Cordialis Saxon. frig.* each two Drachms; Bloodstone prepared half a Scruple, *pulvis sperniola Crollii* four Grains, *Laudanum Opiatum* one Grain, Syrup of Quinces three Drachms. Mix them. Or in form of a Powder;

Take of *pulvis stegnoticus* two Scruples, *Laudanum Opiatum* one Grain, *crocus Martis astringens* two Grains. Mix them.

All testaceous things, which have a Virtue of Correcting the Acrimony of the Blood, and of closing the Apertions of the Vessels, are proper here. And so are things, that expel the corroding Humors by Sweat or Urine; to which purpose Decoctions of the Woods or Essences made of them, do conduce; Receipts whereof we have given you before. *Rodericus à Castro* magnifies this;

Take of the Juice of Affes Dung,
Syrup of Myrtles each half an
Ounce. Water of Plantain three
Drachms. Mix them.

Or this following may be gi-
ven;

Take of Chalybeated Styptick red
Wine two Ounces, Gum Arabick,
Tragacanth each half a Drachm.
Mix them.

Here alſo will be proper things
that ſweeten and dilute the Acri-
mony, ſuch as watry things, Whey,
Etc. Thus not long ſince I cured
a Girl, who had been troubled with
this exceſſive Flux, for above a year,
by drinking twelve Ounces of Juice
of Birch every Day, for fourteen
days together.

Outwardly alſo, as in other He-
morrhages, Aſtringents, Incraſſants
and Anodynes may be applied to
the *Hypogaſtrium*, *Pubes*, or other
Parts: So Vinegar applied to the
Hypogaſtrium either with linen
Cloths or with a Sponge, is good.
Alſo *Emplaſtrum Stypticum* or *ad
rupturam Fernelii* does help; a
Decoction of Alum often does the
buſineſs. A Peſſary ſoaked in a De-
coction of Swine's Dung is of great
uſe. Or;

Take of the Moſs of a Sloe-tree,
root of Tormentil, Biſtort each
one Drachm, Galls one Scruple,
crocus Martis aſtringens half
a Scruple. With a ſufficient
Quantity of *Acacia*, make a
Peſſary. Cover it with red
Silk. Tye a thread to it, and
uſe it.

Mr. Boyle cured a Gentlewoman,
who had had an Uterine Hemor-
rhage for four Months, only with
the Sympathetick Powder made of
Hungarian Vitriol. And ſhe was
afterward ſo obſtructed thereby,
that ſhe was very ill for want of her
Menſes, and he was forced to pro-
voke them again with tincture of
Amber.

Wherefore I have in an Impe-
tuous Flux of the *Menſes*, applied
my Styptick Martial tincture;
with extraordinary good Succeſs.

I alſo highly value linen Cloths
wet in Vinegar, and often applied
to the Breasts.

Dung's alſo of Animals, as Swine's
and Affes, tied in a Bag, boyled in
Vinegar, and applied to Women,
have often excellent effect. Or linen
Cloths may be put in the following
Decoction and applied;

Take of root of Tormentil, Biſtort,
Comfrey each half an Ounce,
leaves of Plantain, Money-wort
each one handful, Shepherd's-
Purſe, knot-Graſs each half an
handful, Agrimony, Nutmeg,
red Sanders, Pomegranate Flow-
ers each one Drachm and an half.
Boyl them in Smiths Water, and
apply it.

Baths alſo or *Inſeſſus* may be
made of thoſe things.

The following Epithem; ſeldom
failed us;

Take of Water of Frog-Spawn,
Nightshade each two Ounces,
Vinegar of Roſes, ſaccharum Sa-
turni, ſperniola Crollii each half
a Scruple. Mix them.

The

The *Unguentum Stypticum Mynsichti*, *Comitiss.* mixt with divers Astringents do not want commendation.

Louyse Bourgeois commends this following;

Take of roots of Eryngo two handfuls, boyl them in Wine. Let her wash well Morning and Evening, and then apply them with warm Cloths, after washing. She must begin to wash behind her Ears, then her Neck, then the whole Spine to the *os Sacrum*. Afterwards she must Anoint the *Ulia* to the Womb.

She has seen some cured with this Remedy in three Days, who could by no other means be Cured.

We do not disapprove of Cupping-Glasses or Ligatures.

§. 20.

LET us briefly see the empirical Medicines.

Prævoetus in the excessive Flux of the *Menfes*, commends Syrup of Asses Dung.

Boerius commends Jasper stone, and others a dried Toad, hung about ones Neck.

Joannes Theod. de Bry his Specifick is Shepherds-Purse and Arsmart, put in ones shoes.

The Powder of Dead Nettle, and washed Sponge is commended by several; and the Powder of the *Matrix* of a Hen put into the Orifice of the *Pudendum* is highly valued by *Crollius*.

Digby's experiment is a Drachm of Powder of Man's Skull, infused a Night in white Wine and Drunk.

Rodericus à Fonseca highly extols this following;

Take of dried Mastich-Tree cut two Ounces. Boyl them in eight Pints of Water. Let her Drink it for several Days, especially when the Flux is Immoderate.

Or four Ounces of Water of Sulphur may be given for a Dose.

Grulingius commends the Fume of dried Oak leaves which may be received under her Cloths.

Joannes Hartmannus in the excessive Flux of the *Menfes* takes a Girdle, sows green leaves of black Hellebore to it, and girds it about the Loins.

Casp. Caldere de Heredia says, a Bath of a Decoction of Alum, is a most effectual Remedy, if it be repeated four times.

Joannes Johnstonus his Specifick is the Cuticle of Geese Feet, dried, and given from half to a whole Drachm.

Domin. Leo commends cold Water, in which the Patient must sit.

Ambr. Paræus extols Quinces roasted in the Ashes, mixt with Bole Armenick and Myrrh, and put into the Neck of the Womb.

Henricus Petrus commends root of white Water Lily, boyled in Wine and drank.

Primrose commends *Sal. Prunelle* diluted with Water or Juice of Plantain.

Riverius reckons the taking a Drachm of the Powder of Chestnut for a secret.

Joannes Schroderus has the following experiment. A Cloth dipt in the Menstruous Blood, mast at a certain time be stuck into the Bark of the Root of a Cherry-tree opened. Some give the Patient her own Menstruous Blood.

Sennertus uses Asses Dung inwardly and outwardly.

Take of Juice of Yarrow three Drachms, Sugar one Ounce or Syrup of Coral. Give one spoonful.

Some commend the taking a Drachm of *Filipendula* root.

Solenander has often tried the following experiment;

Take of the Flowers of Nuts, when they are Ripe, and falling, give a spoonful for several Days in the best Wine upon a fasting Stomach.

§. 21. Cure of the Whites.

These things premised, let us now briefly see the rational Cure of the Whites, which differs not much from the Cure of a *Gonorrhoea*. The Cure therefore of this Chronical Disease consists in a Correction of both Peccant Causes by convenient Medicines, in a Mitigation of the most urgent

Symptom, and in Corroborating the Cervical Glands and Uterine Spirits.

Both Causes are Corrected especially by Aromatick Balsamicks, such as roots of Galangal, Bistort, Florentine Iris, Elecampane, &c. Among Herbs these are proper, Mugwort, Motherwort, Savine, Wild Majoran, Bay leaves, *Scordium*. These things also are good Bay-berries, Aniseed, *Daucus* Seed, red Coral, Crab's Eyes, Chalk, Shavings of Harts-horn, and Man's Skull. Volatil Salts are not to be despised, as being very useful in tedious Diseases, and in correcting Acido-Austere Liquors. And according to the different way whereby each Cause offends, divers receipts of these things may be prescribed, both to be taken inwardly, as Decoctions, Physick Wines, Pills, Powders, Electuaries, Mixtures, &c. And outwardly, as Fomentations, Fumes, &c.

Gumms and Resins are very good in this Disease, and Turpentine better than any, which, as in a *Gonorrhoea*, so also in this Disease is of great Virtue, because it is a disease of the Glands. Aromatick Oyls and other things may be used in this Case. Which things premised, we ought to carry off the corrected Humors, either by Phlegmagogues or Hydragogues. So also Rhubarb and Turpentine are good, because they moderately astringe and consolidate. The Evacuaters may be Pills of the Gumms, *sende Majores*, tincture of Jalap, &c. or the following Medicated Wine;

Take

Take of leaves of Endive, red
Roses, white Melilot, St. Johns
wort each half an handful,
leaves of Mugwort one hand-
ful, root of black Hellebore,
Sponge prepared each half an
Ounce, Seeds of *Carthamus*
six Drachms, Rhubarb half
an Ounce, root of Bryony three
Drachms, large Cloves two
Drachms, Salt of Tartar two
Drachms. Mix them. Make a
Bag.

Or in ferous Whites the following
Bolus;

Take of Rob of dwarf Elder two
Drachms, Refin of Jalap seven
Grains, *Mercurius dulcis* ten
Grains. Mix them. Make a
Bolus.

When the Humors are evacuat-
ed, you may with greater safety
stop the Whites; and here all
things are good which strengthen
the flaccid Glands and the Spirits.
To which purpose Cinnamon,
Bezoartick, Antimoniate, Succin-
ate, and Lignous Medicines do
promise a singular Energy and
Effect. And all Catarrhal Bal-
sanicks, such as Myrrh, Amber,
and Camphore are proper, because
they stop defluxions. The fol-
lowing Powder is excellent;

Take of Cinnabar of Antimony,
Magistery of Saturn, Amber,
*Antimonium Martis Cachecti-
cum*, Cattle bone each one
Scruple, *Laudanum Opiatum*
two Grains. Mix them. Make
a Powder. The Dose from

a Scruple to half a Drachm.
Or,

Take of Conserve of Rosemary
Flowers three Ounces, Shav-
ings of Harts-horn, Magistery
of Amber each three Drachms,
lapis osteocolla one Drachm
and an half, Shells of Hazle-
Nuts Powdered half an Ounce.
With Syrup of red Roses make
an Electuary. Let the Pa-
tient twice or thrice a Day
take the Quantity of a Chest-
nut or a Walnut of it.

Here also *tinctura Antipthi-
fica* joyned with *Anodyna*, and
given often, will do good.

We often use to cure this Di-
sease with one only slight Remedy;
and, unless there be something
else to hinder the Cure, we dare
engage this will perform one. It
is the following Powder, which
we often repeat;

Take of Egg shells calcined half
a Drachm, Vitriol of Mars
from six Grains to ten, and
there may be added to this
Powder, Camphore three Grains,
Laudanum Opiatum one Grain,
Saccharum Saturni five Grains.
Mix them.

For all Nitrous, Saturnine, and
Aluminous Medicines are proper.
This following will not be incon-
venient;

Take of Egg shells calcined, white
Amber, *Osteocolla*, Mother of
Pearl prepared, *alumen plumo-
sum* each one Drachm. Mix
them.

them. The Dose is half a Drachm.

Tincture of Coral prepared with Spirit of the Woods, often giving thirty drops of it at a time is an excellent Remedy. Cuttle Bones also because of their special properties (whereby, besides their general use in correcting a morbid Acid, they also are good in the Whites and *Gonorrhæa*) may be used.

And several things may be put in ones Drink; for instance;

Take of Flowers of white Roses, white Melilot, Endive each one handful, roots of *Filipendula*, Water Lily each one Ounce, Mastic Wood one Ounce and an half, Mistletoe of the Oak half an Ounce. Mix them. Make a Bag.

For the inveterate Whites we, as well as *Bartholine*, commend Emulsions made of Chalybeate Water, adding some Powder of Ivory.

Externally Baths are good, made of Sulphur and Alum, and other Astringents; also *Infessus*, Fumes, Unguents, Plasters, &c. prescribed before. But in this Case an Injection into the Neck of the Womb of a Decoction of *Guajacum* is excellent good; or a Catarrhal Fume may be received, made of Mastic, Amber, Frankincense, and other moderate Astringents, as we use to do in a *Coryza*.

Among empirical Medicines Authors commend these following;

Joannes Agricola commends *oleum Martis viride*.

Louise Bourgeois orders the Patients to eat twelve citrul Seeds, and to drink after them. And this is very good for the Whites.

Hartman. Corbæus accounts it as a secret, to give every day one Drachm of green *Filipendula* root in black Wine. He also commends an Unguent made of Clary and Butter, wherewith the Woman must Anoint her Belly to the Pubes. He also magnifies a Fume of Sage, if it be received into the Womb.

Digby commends the Fume of Sulphur of Antimony.

Rodericus à Fonseca commends Mastic-tree Wine as an approved Remedy.

Petrus Forestus gives us this following as an experienced Medicine;

Take of the Jaw of a Pike, the Head of a Capon dried in the Oven half an Ounce, Date Stones two Drachms, Coriander prepared, Aniseed roasted each one Drachm, root of Water Lily half a Drachm, Sugar of Roses three Ounces. Make a Powder, and give some of it in red Wine.

Abraham Frambesarius commends a Decoction of *Guajacum* Drunk in the Morning for several days above other things.

Gruelingius saw an old Woman cured of this Disease, who took a

linen

linen Cloth wet with the Whites, and hung it in the Oven, upon which they ceased.

Hieronymus Mercurialis protests he has cured this Disease by giving a Drachm of Hares Runnet in a Decoction of Oak Leaves, for eight or ten days.

Panarolus cured it with a Decoction of Pine and Milletoe.

Reinerus Solenander commends the taking of new Milk boyled, with Gold quenched in it, to the Consumption of a fourth or third part.

Ludovicus Sepralius says, that Salt Baths are a very present Remedy.

CHAP.

C H A P. V.

Of Barrenness.

§. 1.

Great is the obscurity and blindness of Physicians about the Generation and Birth of Man, so that the Sacred Writ itself seems to intimate the same, *Ecc. 11.* Before therefore that we come to the Disease, we will discourse the Work of Generation. Careful Dame Nature has three ways of Generation. 1. Out of Putrefaction; as all or most insects. 2. Out of Seed committed to the Earth, which after Fermentation germinates; so grow Plants. 3. By *Epigenesis*, that is, out of an Egg, as most Animals are Born, and the most noble of them, Man, according to *Van Horn*, *Kirkringius* and *de Graaf*, who maintain, That in Women's Testicles there are Membranaceous little Bladders, full of Humour, which they do very well style *Eggs*; and they demonstrate that Man is generated of such an Egg, and that there is a very fruitful Ovary in Women. The Vulgar sort of Physicians indeed do hold, That a Woman's Seed is contained in her Testicles, is mixt with the Man's in her Womb, and that so a Conception is made. But *Harvey*, in his excellent tract *de generatione animalium* p. m. 2. says, That

all manner of Animals, even the Viviparous, yea, Man himself is bred of an Egg, and the first conception of them, out of which a *Fœtus* is made, is very Eggs. *Aristotle* thinks Conception is made out of the Menstruous Blood. But the most received Opinion concerning the manner of Conception is, That every Egg in its proper Receptacle or Testicles, is Fecundated by the virile contact, that the Fecundated Egg does Day by Day encrease; at length through the necessity of Place and Site it is excluded thence into the Womb, and there it ferments, till it hath received all the Lineaments or Parts; therefore *Steno* says, That every Womb, while it has a *Fœtus* in it, is with Egg. Which Opinion has already been proved by many Reasons and Experiments. We conclude therefore with *Regner de Graaf*, and others, that those Vesicles, which the Coat of a Woman's Testicle does involve, are true Eggs, out of which, and in which Man's Body is Generated: These Eggs are Fecundated by Spirits exhaling from the Man's Seed, and by the benefit of the glandulous Body are discharged into the *tube Fallopiana*; through which they are conveyed into the Cavity of the Womb. And hence it may certainly be concluded

concluded, that these Eggs ought to remain in Womens Testicles, till they are Fecundated by a virile Air; for that you can no where see the Membrane of the Testicle perforated, and therefore it cannot give a passage to the Egg; but when the Egg is Fecundated with the virile air, about that time a certain glandulous Body is Excreſcent, which affecting the Membrane of the Testicle draws off one Egg from another, which when done, this glandulous Body in time vanishes, and the Woman's Testicle is reduced to its pristine State.

Wherefore Dr. Charleton *lib. de Scorbuto p. m. 78.* says, the geniture is reckoned most Fruitful and fullest of Spirits, which is far and strongly ejaculated. And so the Noble *de Graaf* quotes the Opinions of the best Authors about Conception and Woman's Seed, *cap. 13. de Mulierum Organis.* To whom for brevities sake I refer my Reader.

Description.

BArrenness is described to be, *an Impotency to Conception through some fault in the Womb, the Ovary, or its Vessels.* Here we shall only examine Barrenness, so far as it concerns a Woman alone.

§. 2. Part affected.

BY the consent of all Physicians the Womb is acknowledged for the Subject: Though some alledge, that so it has sometime happened, that a Woman has vomited a Child of a Fingers length. See *Salmuth*

concerning this Conception. And so *Bartholine* relates, how a Bitch and a Cat brought forth their young ones at their Mouth, and Expired. Some also affirm, that a *Fœtus* and a Mole have been conceived in the tubes of the Womb; but these things are rare. We take for the Subject, the Womb with the *tuba Fallopiana* annex to it, and the Woman's Ovary.

§. 3. Diagnostick.

THE Signs of this Disease are manifest; for such as are Barren, either bear not at all, or very seldom, and they breed but Weak and Tender Children: But all the contest often is, whether the Cause lie in the Man or the Woman? This causes Grudges and Litigiousness between a Man and his Wife, while the one accuses the other of Impotency. For the deciding of this controversie, Antiquity has proposed several ridiculous things: for instance; Take each Married parties Urine, and Pour it upon Lettuce, and whose side Withers, there is the Barrenness. But it may far better be known, by the cold temperature of the Woman, her strait Loins, defect of hair on her Pubes, and other Parts, and by the Whites. And hence perhaps it is, that this Disease is only cured now and then by Chance, for it need not be questioned, were the causes certainly known, but more might be cured of it.

§. 4. Causes.

§. 4. Causes.

BUT to say no more of these things, we will proceed to the *Ætiology*, and see what the *Ancients* reckoned to be the Cause of Barrenness. And among them the *Arabians* fly to occult Qualities.

The *Stoicks* lay the principal blame of sterility upon the disagreeable Powers and Qualities of the Bed-fellows.

Some have the Faculty of their Womb frustrated from their Conception. *Riberius* has four Causes.

1. When the Reception of the Seed is hindred, either through the Smallness and Narrowness of the Genital Parts of Young or Old Women; which also is hindred, when Maids are Lame, and have their Thighs distorted; or are Flat in the Hips, so that in Coition they cannot well make a convenient Figure, for the due Reception of Seed. He adds excessive Fatness, which straitens the passages of the Womb. Among the Nonnatural things he reckons the Passions of the Mind, especially hatred conceived between the Married Parties, whereby the Woman being averse from this sort of pleasure, does not supply Spirits sufficient, wherewith the Genitals at the time of Congress should be Turgid, that the *Matrix* as it were overjoyed may meet the Man's Seed, and kindly entertain it, and draw it into its Cavity and also Irrigate it with her own Seed, poured out in that pleasure, that so (as he speaks) from the commixtion of them both a Conception may arise.

2. So also the *Ancients* say, Conception is hindred, when the Seed is not retained, either by reason of the excessive humidity of the Womb, or of external humid Causes, as Bathing, Idleness, moist Diet, or of the Whites of a long continuance.

3. *Riberius* his third Cause is, when the Seed is corrupted in the Womb.

4. He assigns the fourth Cause of Barrenness, when a Woman affords not matter sufficient for the Conformation and encrease of the *Embryo*, through defect of Seed or of Menstruous Blood; so such as are either too young or too Old, conceive not, for want of both Matters.

§. 5.

Hæmont acknowledges neither Heat, nor Cold, nor Moisture, nor defect of the *Menstrua* nor any thing else for the true Cause of Sterility. For he says, "I see only one Cause Adequate and Co-ævous to a positive Entity, which is called Barrenness, described by the Scriptures in these Words. *GOD opened Sarah's Womb*. For it is the gift of God, conferred on Nature, whereby the Parchment of the Womb, well closed with its Folds, is opened and dilated at the congruous Moment of Congress. There is (says he,) a Magnètick drawing *Blas*, by which for fear of a *Vacuum* an Attraction of Seeds and an Adequate Repletion of the dilated Folds follows that Apertion. That is, the fore said Apertion Sucks for fear of a *Vacuum*; which, if it be done in an undue Moment, is done

“done in Vain. For the Womb of a
 “Virgin is scarce two Inches wide,
 “because it is folded into it self in
 “very little Folds. But the opening
 “of it consists not in Man’s will,
 “or in Titillation, or Luxury, but
 “altogether in the Divine good
 “pleasure, wherefore there are some
 “gifts dispersed in Nature of Open-
 “ing and Shutting; so that some
 “Simple have obtained this Facul-
 “ty. Nor is it sufficient that the
 “Womb open at the stated Mo-
 “ment, unless the arriving Guest
 “be grateful to the place. For if
 “it be touched with any Taint, all
 “hope of Generating with that
 “Man will be in Vain, because the
 “offended Womb, conceives a rage
 “of Abhorrence, scarce to be re-
 “conciled.

§. 6.

Wth other Authors, will now examine the Cause of Barrenness through the Wife’s fault; as for the Man’s, we shall examine that, in another place. Some therefore are Barren, either because they are Imperforate, or their *Vagina* is too strait, to admit a Man. Some again can admit a Man; but either the Seed, or the Air of it, cannot reach the Ovary, sometimes through the Falling-down of the Womb, or the Cervical Glands of the Womb being Swelled, or in such as whose inner Orifice of the Womb is distorted, closed up, or any way straitned, or because of Tumors, Exulcerations, Cancer, &c. or because the *tube Fallopiana* are obstructed: and thus the passages from the Womb into the *tube Fallopiana*, are ei-

ther obstructed, closed up, or compressed.

Some are Barren because their Eggs are either Intemperate, obstructed, hardened or wrapt in an over hard Membrane, so that they cannot ferment by contact of the Man’s Seed. Others, because their Eggs are little or juiceless, and have nothing in them. Others, because they are Intemperate in their whole Body, either Cacochymick, or over Fat, or they have their *Menses* too much, or the Whites; but generally the Cause of Barrenness lies in the obstruction of the *tube Fallopiana*. So we opened a Barren Woman, whose Tubes were Callos; and another had Stones in her Tubes. For if they be obstructed, the seminal Air cannot reach the Ovary, so as to Fecundate them. And it is apparent, that the obstruction of these Tubes may happen divers ways, either by viscid Phlegm, or an Austere Acid, a *Callus*, or Stone: these passages are stopt also by too much Fat, which Fat likewise by its oleosity hinders the reflux Lignors from fermenting: whence it is, that over Fat Women do not easily Conceive. There may also be an abhorrence in the Plastick Spirit. And Conception may be hindered by an Ill Constitution and too great Laxity of the Pores.

To these may be added external Causes, to wit any intemperate Air, or one too thick, cloudy, stinking and impure. And Watry, Acid, Austere, Glutinous and Gross Diet, and sometimes Spirituous, Hot, Aromatick and Melanagogick Medicines used immoderately; the abuse of Incrassating and Moistning Medicines, Baths, &c. Watching, excessive and unseasonable Sleep, ove

over much exercise of Body or Mind, an Idle and Sedentary Life, Passions of the Mind, and especially hatred: Excretions either suppressed or excessive, and especially a *Diarrhœa*, excessive *Menses*, Whites, too much Sweating, Vomiting and the like. Finally misfortune by Abortion, difficult Travail, a Wound, Ulcer, Swelling of the Glands, stone in the Bladder, Blow, Fall, Contusion, Compression, &c. or from Causes or Diseases both of the Womb it self and the adjoining Parts. As for what Authors talk of the Stars and Enchantments, I have ever been dubious in the Case.

§. 7. Prognostick.

AS to the Prognostick; this Disease is not dangerous, and oftentimes not very prejudicial to health. It is Chronical and often incurable, chiefly that which arises from a Coalition of Various parts of the Womb, especially from a total obstruction of the *Fallopian* ducts, by a *Callus*, Stone, &c. or by grievous Diseases of the Womb, an *Atheromasteatoma*, *Scirrhus*, Cancer, Gangrene, tedious Whites, &c. Likewise, if there be a carious Excrescence in the *tube Fallopiana*, or if there be an excessive Copulency, and if it be Connate.

§. 8. Dietetick Cure.

PART of the Cure consists in Diet, or the six Non-naturals. The first of them by the general consent of Physicians is the *Air*. It must be temperate: Cold

and Winter Air must be avoided. The change of Air has made many Women Barren; I could give an instance; but for some reasons I shall forbear. The Food must be of good Juice, we reject all that is Crude, Windy, Viscid, Acid, and over Aromatick. Drinking of Cold Water is hurtful, and Wine, excess in which has made several Women Barren, as dayly experience, alas! does testify. We disapprove of Guzzling too much Coffee or Tea. Motion must be moderate, to much must be avoided: for the reason why the *Seychian* Women are often Barren, is their too much riding. And therefore *Aristotle* writes, that through bearing too great burthens and over toying, the *Barbarian* Women are apt to be Barren. Upon this account, we blame Jumping, Shouting, Bawling, Coughing, and frequent Sneezing. Nor must we exclude Passions of the Mind, to wit, Anger, Sadness, Fear, Hatred, Joy, Love. Sleep must not exceed bounds, nor must it be unseasonable: So over much watching may do harm, inasmuch as it greatly suppresses the animal Spirits, which ought to contribute much to Conception. In this case especially the *excreta* and *retenta* must be agreeable to Nature: For the *Menses* either suppressed or exceeding, or the Whites, do harm. Excess in *Venus* is hurtful; therefore we see, Whores are generally Barren, because the Vessels, are too lax, so that an Egg cannot stick to the Womb.

§. 9. Phyr-

§. 9. Pharmaceutick Cure.

NOW we are happily fallen upon the Pharmaceutick Cure. And we will first see the *Galenical*, and indeed that of *Riverius* who according to the diversity of the Cause insists upon a diverse Cure. That therefore which has its rise from over Fatness, must, according to him, be cured by an extenuating Diet, and convenient Evacuations. If Barrenness proceed from an ill Course of Diet, as in Gluttonous, Drunken, and Water-drinking Women, he advises such to a strict rule of living. He says, the robust *Virago's* must be effeminated, by abstaining from Meats of a gross juice, by Labour and Exercise, and the convenient Flux of the *Menstrua* must be procured by repeated Purgers, and Venesection.

But if it proceed from a closure of the Womb, Distortion, Obstruction, Tumor, or Ulcer; care must be taken of them by proper Remedies. So an over Hot and dry Constitution, must be corrected by Coolers and Moistners; and an over cold one by Heaters. For *Riverius* says, That a cold and moist Intemperature is the most frequent Cause of Barrenness: therefore in this Case first of all he orders the pituitous Humors to be evacuated by Purgatives, Diureticks and Sudorifics. For Revulsion's sake he applies Cauterics to the Arms and Legs. Then he will have the principal Parts strengthened with Treacle, Mithridate, *tabell. arom. rosar. confectio Alkermes*, &c. Afterwards he has recourse to such things

as have a Specifick property to strengthen the Womb, help Conception, and provoke Venery, Receipts whereof you may see in *Riverius*.

§. 10.

IN our Opinion the Indication in Barrenness may be manifold, and now and then contrary; and so divers Remedies may be serviceable to Women: Which makes me the more to wonder at the Ignorance and Stupidity of those Men; that think they can by one and the same Medicine, Cure all Barren Women; and boast of I know not what Specificks. But we, according to reason, do judge, That a different Cure should be insisted on, as the Causes differ; and Specificks may be used in all.

Barrenness therefore, that proceeds from a Woman's incapacity to admit a Man, is cured by removing the Impediments. That which proceeds from an *Acido-Austere*, contracting the *Fallopian* ducts and other Vessels, and sometimes putting their Fibres into Convulsions, and so disquieting the plaitick Spirit, is cured by things that correct an Acid; and an *Austere*, such as are volatil Aromaticks; also divers Absorbents, Cinnabarines, &c. Which end the following Powder answers, half a Drachm of it being often given;

Take of native Cinnabar half a Drachm, shavings of Ivory two Drachms, Woman's Secundine dried one Drachm. Salt of *Satyrium* half a Drachm. Mix and give it.

Q q q

But

But if the *Fallopian* duct be stoppt by tough Phlegm or some Tartareous matter, so that the Man's Seed cannot Influence the *Ovarium*, in that Case divers Preparers will be proper, as Inciders, Attenuants, and Purgers. Among Preparers and Inciders, this following, or some such Physick Wine, will be proper ;

Take of leaves of Rosemary, Baum, Sage, Mercury each one handful, root of Eryngo two Ounces, *Cassia lignea*, large Cloves each three Drachms, Seed of *Ammi*, Serrimountain each half an Ounce, shavings of Ivory two Drachms. Put them in a Bag.

So a Decoction of Rosemary in Wine, for the ordinary Drink will be good, essence of Sassafras Wood, *Satyrii Crollii*, and Amber, made with Spirit of Baum, are generous Remedies in this Case.

All volatil Salts are good, inasmuch as they open the obstructed passages. *Hartman* commends Salt of *Satyrion*, if half a Scruple of it be given often in Sack or *aqua vite Mulierum*. So *Platerus* gives Oyl of Majoran, and Musk each one Grain, with Hare's runnet in some convenient Vehicle. Indian Chocolate well aromatized, and taken every Day in Milk, has an excellent faculty, in exciting the Spirits of the Womb, and also of opening the passages.

These Preparers and Inciders premised, you must evacuate this Viscid Phlegm out of the Body, by this following, or some such thing;

Take of leaves of Mercury, Rosemary each half an handful, *car-*

dius benedictus two Pugils, root of Eryngo one Ounce, Flowers of Rosemary, Sage each three Pugils, root of *Mechoacan* one Ounce, white Agarick half an Ounce, seed of *Carthamus* one Ounce, *Ammi*, Serrimountain each one Drachm, large Cloves, *cassia lignea*, the whitest Cream of Tartar two Drachms. Mix them. Make a Bag. Or;

Take of Conserve of Rosemary Flowers, Sage each half an Ounce, Resin of Jalap three Grains, *pulvis catholicus purgans* one Scruple. Mix them. With Syrup of Cinnamon. Make a *bolus*.

Pills also and Potions may be given if you please.

But if the Ail proceed from Poyson or a Philtre, then we advise Vomits. Thus a Noble Woman vomited up three Worms, and became Fruitful.

If the Disease arise from too much Seed, then extinguishers of Seed are proper, such as *agnus castus*, Wormwood, Camphore, &c. But if it proceed from some fault in the cervical Glands, then such things as we mentioned in the Whites, remove it.

If the teguments of the Eggs be too Thick, and cannot be fecundated by the Influence of the Man's Seed, the foresaid Volatil Salts will be good, especially volatil Spirit of Sal Ammoniack Anthosate, and divers Fumes, Infusions, Pessaries, &c.

If it proceed from too much Copulency, then beside a spare Diet, a Decoction of the Woods and their Essence, and sharp things may be used a long time. Here also *pistule contra*

contra pinguedinem Mynsichti with distilled Oyl of Sassafras Wood will be proper.

If from Paucity of Liquor contained in the Eggs, all things that increase Seed are proper, especially Chocolate boyled in Milk, and the following Electuary;

Take of the Conserve of Flowers of Sage, Rosemary each one Ounce, Candied Eryngo root, Candied Nutmeg each three Drachms, Chocolate of *Sevil* one Ounce and an half, Powder of large Cloves, Seed of Sermountain each two Drachms, with Syrup of Cinnamon make an Electuary.

Also *Diacinnamomum regium* is an excellent Medicine, *Conditum Mynsichti*, *ambratum*, and *moschatum*; also Panado made with Wine, Eggs, Mace and Sugar are good. And here the Parts of Salacious Animals are proper. Therefore the following Decoction is accounted a Specifick against Barrenness;

Take of leaves of Mercury, Flowers of Sage, Rosemary each one handful, large Cloves, Nutmeg each two Drachms, the Womb of an Hare, of an Hind dried each No. j. Make a Decoction according to art.

Of these and other things divers Electuaries, Infusions, and other forms of Medicines may be made, which are extant in Authors. *Ettmuller* highly commends preparations of Vipers, his Words are these: "There is therefore a true Balsam hid in Vipers, and in their Volatil Salt, which renews the œconomy

"of the whole Body, and the effluvia
"Ferments of the Bowels; it stoutly
"preserves, and strenuously restores
"the vital Fermentation of the
"Blood. Hence it is that an elegant
"rejuvenescence usually follows the
"drinking of Viper Wine. *Helius
"deus Padeanus in curat. p. 294.*
"says, That by eating broth of boyl-
"ed Vipers, a Woman forty years
"Old, who before was Barren, after
"her Leprosie was cured, became
"Fruitful. Just as Cocks and Hens
"do, that are fed with Vipers, as
"*Zwelfer Animal class. 12.* writes.
"And they are so very Fruitful, that
"eating of them has the same effects,
"and is good for a foul Scab, the
"Pox, &c. and for Fruitfulness,
"Prolongation of Life, Cleanness
"of Body, and Cleanness of Eyes.

Simon Pauli, be the Cause what it will, recommends to Barren Women, the use of the Powder of the Herb Speedwel, which he gives them in the distilled Water of the same Herb, and he cites several instances of honest Matrons, who were made Fruitful by it. *Patterus* also, Doctor in Physick and Chirurgery, and Chirurgeon to the Court of the most Serene Prince of *Hesse*, solemnly protested to me, that he has often seen the use of Medicines made of Speedwel experienced in Barrenness.

If Barrenness proceed from the Glands being too Lax, divers Astringents both Internal and External mixt with Specificks, will do good.

But if it proceed from the long continuance of the Whites, then first give an Uterine Clyster, and afterwards the following Powder of *Simon Pauli*.

Take of leaves of Speedwel well Powdered, Seed of true *ammi* each half an Ounce, lesser Cardamom, choice Cinnamon each two Drachms, Sugar Candy a quarter Part of the whole Weight. When they are powdered, add to them a few Drops of Oyl of Cinnamon. The Dose is from half a Drachm to a Drachm.

So *theriaca celestis* often used gives help; for by means of the volatil Salts the *Fallopian* duct is opened, whereby the Eggs in a Woman's Testicle, are fecundated and got out.

Among Externals a certain volatil Liquor made of mineral Spirits excels all, which may be used in one of our Instruments or *Glauber's*; or they that want them, may put it in a long necked Viol, the Mouth may be applied to the *Sinus Pudoris*, and the bottom may stand upon the Coals, and so the volatil Spirit may be received. By doing this not only the *tuba Fallopiana* is opened, but the Eggs that are too thick skinned, are made thinner and tenderer, so that they may be the better fecundated by the Seed, and the plattick Spirit appeased. Divers artificial Baths are good, especially one made with Ants. Natural Baths also are good, whether Sulphureous, Bituminous, Aluminous, or Nitrous.

We commend also *Infessus* made of Aromatick Herbs and Roots, and of Minerals. After a Bath or an *Infessus*, a Fume may be made of Gum *anima*, *tacamahaca*, Amber, *Benzoin*, &c. for instance;

Take of Gum juniper one Drachm, Berries of Juniper two Drachms, Frankincense, Mastich, Gum *anima* each half a Drachm. Mix them.

Or after Bathing an Infusion of some Liquor may be made by a Syringe. Or the aforesaid way may be used. Divers Pessaries are proper, especially such as are made of Volatils. Garlick with Oyl of Spike administred in form of a Pessary, is commended. Uterine Clysters likewise will be good; for instance, that of *Simon Pauli*;

Take of root of both the *Aristolochie* each two Drachms, Gentian, Zedoary each one Drachm, leaves of ground Ivy, lesser Centaury, *Aristolochia*, Rosemary each one handful, Baum, red Mugwort each half an handful, lesser Cardamom half an Ounce. Cut them, bruise them, and boyl them for an Uterine Clyster.

Or this, or the like Liniment, may be made to Anoint the Belly, from the *Pecten* to the Navil;

Take of Saffron, Spike, Mastich, *Styrax* each three Drachms, *Fellum* one Drachm, Wax one Ounce, Oyl of Spike and Roses each what is sufficient. Mix them.

We refer these following to the empirical Class.

Julius Caesar Baricellus advises in Barrenness, that the Man and Woman, every Day Fasting, drink in the Broth of an old Cock, the Powder

Powder of the Stones of a Boar, or a Ram dried in the Shade.

Oswald Grembs says, it is an excellent expedient for Fecundity, if the Man and Woman Anoint themselves with Oyl of Ants.

Philippus Grulingius says, this following is a most certain Remedy, and will help Conception;

Take of the Testicles of a Ram prepared in Wine, and dried, the Womb of an Hare prepared, Mace, Cloves, Seed of true *Ammi* each two Drachms, Saffron one Drachm and an half, Pith of Hazel, Fiftick Nuts each 6x

Drachms. Bruise them. Boyl them in a Quart of Sack to a third. Take two Ounces after Meal, for three Days, on the fourth let the Woman lie with her Husband, and she will Conceive.

Dominicus Leo commends the frequent use of Peony Seeds, and Filings of Ivory Drunk in red Wine by a Barren Woman.

Some also account *Hippocrates* his Pessary as an *arcantum* to strengthen the Womb. It is made of Powder of the Loadstone with Woman's Milk.

Qq93

CHAP.

C H A P. VI.

Of Symptoms of Women with Child, that is, Nauseousness, Vomiting, Longing, Spasm, false Conception, Miscarriage, and Mola.

§. I.

FROM what was said before one may gather, that Man is made in, and of an Egg: for the bud is in these Vesicles, out of which humane Bodies sprout, to wit, when, upon the approach of the seminal Air of the Man, this bud is disposed to sprout, which disposition of the Egg is called Fecundation or Conception. For when the Man's Seed is ejaculated into the Womb, yea often into the very Ovary, the seminal Air exhales; gets into the Testicles, penetrates the Eggs that stick there, and is diffused through the whole substance. And if there happen to be but one of all the Eggs, in whose bud a Liquor is found disposed to ferment with the seminal Air, immediately that Effervescence commences, which must last all the Life long of the Body to be produced; and then a Woman is said to have Conceived, and an Egg to be fecundated. The Egg thus fecundated glides through the Fallopian ducts into the Cavity of the Womb, and then the quantity

of the humor encreases; so that in form of a bubble it indefinitely receives increase. Hence almost all Anatomists have observed the Rudiments of a *Fetus* to be a Bubble. And what disturbances are raised about this act, the Symptoms of Women with Child do testify. For in the first days of Conception, there are loathing their Meat, Nauseousness, and Reaching to Vomit, strange Longing, Gripes, Loosness, Toothach, *Vertigo*, Headach, Cramp, sometimes the Sciatica, often a false Conception and Abortion. About the middle of the time, the Poor big Bellied Women are afflicted with a Cough, Palpitation of the Heart, Swooning, Pain in their Loins and Hips, Bleeding at the Nose, Haemorrhage of the Womb, &c. In the latter end of their time, they are troubled with stoppage of Urine, Strangury, Costiveness, breaking of their Bellies, and often instead of a Child they have a *Mola*. The chief of these Symptoms, and such as happen most frequently, we shall briefly examine as to their Causes and Cure.

§. 2. Definition of Vomiting.

Vomiting of Women with Child may be described to be, an Excretion of the Contents in Women with Child, arising from a Convulsive motion of the Stomach, while the animal Spirits, irritated by things bred or moved in the Conception, endeavour to expel what is troublesome by it.

Difference.

FOR some indeed are only troubled with a Nauseousness, according to the disposition of the Stomach, and aptitude or ineptitude of the matter to be voided. Some are troubled in the Morning, others in the Evening, some after Meal, some cast up all their Meat, others none, or but a little viscid matter; some when they have done Vomiting are better, others worse; some are ill at the very Moment of their Conception, others not till several days after, sometimes Weeks, and sometimes a Month or two, some begin to vomit in the beginning or middle of their time, others are troubled with it all the time they are with Child. But this happens according to the different Nature of the Subjects, the seminal Air, the disposition of the Eggs, Conception and time of Impregnation. Some Women with Child cast up Meat or Drink, chyle or cholerick Matter, others Phlegmatick Matter, and some pure Blood, as we read in *curios. Ephemerid. obs. 6.* a Case of a Woman, who from the first Month of her being with Child, to the last, every day vomited Blood,

sometimes florid, sometimes a little coagulated, about eight Ounces, without damage or any considerable harm, being otherwise in perfect Health.

§. 3. Description of Longing.

A Pica, Malacia, or Longing, is an Appetite of things Impossible or Absurd, depending upon a peculiar Influx of the animal Spirits, and Regiment of the Plastick Spirit.

§. 4. Description of Miscarriage.

Miscarriage is one of the greatest and most frequent Miscchiefs, that attend Women with Child, wherein Women are afflicted grievously, yea much more grievously than in a natural Birth. *Andreas Smitzius* gives this as a reason, Because unripe Apples cannot be pluckt without Violence. There are some of these poor Wretches, that, as *Haferus* in his *Hercules medicus* says, do protest they had rather bear ten Children, than Miscarry once. There are some that Miscarry as they walk, without going to Bed. I have known several such. An Abortion therefore or Miscarriage may be described to be, a preternatural and unseasonable exclusion of a Child, not then perfected, or of a scapeless Mole, with great Pain and Anxiety before the seventh Month, be it born alive or dead, arising from Causes which shall be hereafter mentioned.

§. 5. *Description of a Mole.*

A Mole, or a false Conception, is, a *scapeless, inanimate, and conglobated Lump, without Bones, or Bowels, hard and covered with a Pellicle, red and bloody on the inside, on the outside of a whitish red, of an Oblong round Figure, about as big as a Hen or Goose's Egg, Conceived in the Womb, resembling a Fœtus.*

Difference of a Mole.

They commonly make a Mole to be three fold: The lesser, and that about as big as a Hen's Egg, they call a *Sun Calf*, which comes away generally about the third Month. The second they call a *Moon calf*. And a Woman goes with a third a whole year, yea, sometimes all her Life time, as the writings of Physicians do testify.

The Descriptions of the rest of the Symptoms may be had before in their proper Chapters. Wherefore we will now consider the Part affected.

§. 6. *Part affected.*

AS for Vomiting in Women with Child, the Part affected, is, by the Universal agreement of Physicians, reckoned to be the Stomach; but how that is affected, is yet disputable amongst them. However it is beyond dispute, that Vomiting is caused by Conception, whether it be by Communication of the Coats or Nerves of the Stomach,

with the Nerves of the Womb, or by a Heterogeneous Ferment, communicated to the Stomach by the Womb.

There are some, that lay the fault upon the Spirits being occupied about the Formation in the Womb, deserting the Stomach, and the business of the first Digestion, being thereby deprived of a vital Character, whereupon Crude humors are bred and provoke the Stomach. Some say it is caused by the stoppage of Impure and Corrupt Menstruous Blood. For it is certain, that in a Conception not only the Blood and Spirits, in regard of their Particles, are much altered by the Conjunction of the Spirituous genital Liquor, with the Woman's Egg, or Vesicle; but the particular Effervescence, Turgescence, and otherwise customary Evacuation of the Heterogeneous Particles in the Blood, if there be any, do cease. So the Part affected in Longing is the Brain: And the Womb is reckoned the Subject of an Abortion and Mole.

§. 7. *Diagnostick.*

HAVING done with these things, we will fall upon the Diagnostick, which we reckon must be taken from the Patient's Relation, not neglecting the concomitant Symptoms of this Disease. But since Patients do not well know, whether they be with Child or no, it will be the Part of a Prudent Physician to discern, whether Vomiting proceed from gravity or from some other Cause. In these things the Books of Practitioners are plentiful; but in our Opinion, at the very first a Physician

cannot tell whether Vomiting proceed from being with Child or no. For oftentimes Vomiting accompanies false Conceptions. Moles, divers Animals in the Womb, and a Dropſie often deceives, under a notion of Impregnation. Tumors, Abſceſſes and Wind do often extend the Belly. Concerning which you may find many remarkable Obſervations in *Ephemerid. Germ. Ann. 1. obſ. 1.* and in other years.

§. 8.

THE Signs of Longing are, when Women with Child deſire abſurd things, ſuch as are otherwiſe abhorrent from Nature, ſuch as raw Fleſh, and Fiſh, Eels, Frogs, (an inſtance whereof I knew) Tar, Chalk, Coals, and a thouſand other things. So a Woman bit out a piece of her Huſbands Arm. And *Nicol. Tulpius obſ. med. 1. 2. c. 24.* has an inſtance of a Woman that eat four hundred Herrings. I knew one that eat Filings of Steel, and another that longed for Lead.

The Signs of an actual Abortion are manifeſt. It may happen from the firſt moment of Conception, till the beginning of the ſeventh Month. It often happens about the end of the third Month; but it falls out ſometimes both before and after that time. Before the tenth week after Conception, Excluſions are ſcarce reckoned Miſcarriages, becauſe then ſcarce any Rudiments of a *Fœtus* appear nor any beginnings of a *Placenta*. Wherefore then it may rather be accounted a *Mola*; for unleſs the *Fœtus* appear in the Body of the *placenta*, it cannot be allowed to be a true Conception, and therefore cannot be a Miſcarriage. Now

the Signs of an imminent Abortion, are various, and often incertain, becauſe it comes upon Women unexpected, and on the ſudden. But you may probably know it, by the foregoing Cauſes already mentioned, which are able to produce a Miſcarriage, alſo by ſudden ſhivering and ſhaking, attended with a little Heat, by Nauſeouſneſs, loſs of Appetite, great Thirſt, Pain of the ſide, Loins, Laffitude of the whole Body, Fainting, Palpitation of the Heart, ſtinking Breath, Fright, Grief, and ſuch things. By a dull Pain in the Womb above the *Pubes*, leſs deſire to Venerſy, Cold of the genital Parts, &c. It is alſo evident by the *Excreta*, as if a Woman with Child have her *Menſtrua*, or an encreaſe of the Whites, if the colour of the Body change, eſpecially the Face. There are ſome who only by the colour of the Face will foretel an Abortion. Beſides, there are ſome particular Signs, as the Detumeſcence of the Breſts, or abundance of Milk running from them. To which you may add, a frequent cuſtom of Miſcarriage: for many that are uſed to it, Miſcarry upon any ſlight occaſion.

§. 9.

ALL the Signs of a true Conception, happen in the Conception of a Mole, the *Menſes* ceaſe, the Appetite is depraved, there are Nauſeouſneſs and Vomiting, the Breſts Swell, and about the fourth Month, there is ſome Commotion of the Womb, like quickening, which endeavours to eject the Mole. And if it be not ejected, the Belly Swells, and other Symptoms ariſe.

§. 10. *Differe*

§. 10. *Difference.*

BUT it is distinguished from a true Conception, in that, in a Mole no Milk can be squeezed, out of the swelling Breasts, as it may in a true Conception. In a Mole also there is no lively Motion felt, as from a Child, but it rolls only from one side to another like a Stone, with much trouble. It is distinguished from a Dropsie in hardness. In a Mole indeed the Belly Swells, but the Arms and Legs are Lean. Besides, it is the property of a Mole, that by the pressing of the hand, it may be thrust from one side to the other, which cannot be in a true Conception. Lastly a Woman, that goes with a Mole, perceives a violent Commotion in her Belly, before the third Month; but in going with Child, rarely before the fourth.

We have already treated sufficiently of the Signs, Causes and Way of Cure of the rest of the Symptoms in the Cure of Diseases of the Head, Stomach, &c.

§. 11. *Cause of Nauseousness and Vomiting.*

THese things premised, we will enquire into the Causes of the Symptoms in Women with Child. The Galenists say, that Vomiting arises from the stoppage of the Menstruous Blood, which corrupts, sends out Fumes, and so irritates the Stomach.

Sylvius says, That the whole time of going with Child, the Womb is so contracted and cor-

rugated, that the Blood standing in its Vessels and Caverns, is repelled upwards towards the rest of the Mass, that this Blood is altered in the Womb, from the alteration whereof several bad humors arise. But, according to him, the Bile together with the Pancreatick Juice, exerts its Malice, and proves the Cause of Nauseousness and Vomiting, and also of Loathing and Longing.

For such Women, as have a Fluid, moveable and sharp Bile, they are not only troubled with Nauseousness, but with Vomiting also.

But such as have an Austere, Pancreatick Juice, they are more troubled with Nauseousness than Vomiting. And he ascribes the Cause to Exhalations raised in the *Duodenum*, which are carried to the Stomach, and irritate and tickle it, and sometimes corrode it. He also derives the rest of the Symptoms, as Swooning, *Vertigoes*, Liffeness of Body, divers Fevers, Leanness, Cachexy, shortness of Breath, from the vitiated Effervescence of the Bile and Pancreatick juice, by reason whereof, he says, Exhalations arise to the Stomach, and there cause Fits both Slight and Violent, and other Symptoms.

§. 12.

WE reckon the Imminution of Blood and Spirits by Conception is the Cause, why Vomiting and Nauseousness come upon big-bellied Women. For it is very evident, that the Spirits of our Body can by unanimous consent affect one another. So the plastick Spirits quartering in great Troops

Troops about the Womb, by reason of affinity may easily irradiate the Stomach, and do often spasmodically evert it: Nauseousness, Loathing, Fainting, Weariness, and other Symptoms, familiar to Women with Child may also be deduced from the disorder of these Spirits. And so the new bud, Sprouting in the Womb, may easily vellicate the Membranes common to the Womb with the Stomach, and spasmodically affect them, whence often proceed, Nauseousness, Vomiting, &c. as one may see in Vomiting, arising from the Stone in the Kidneys. Many crude Salts also (which breed through the retention of the Menstruous Blood) may be communicated by the Blood, Serum and other Humors, to the Stomach, which irritate the Fibres thereof, and so are the Causes of many mischiefs, especially of Nauseousness and Vomiting. And a depraved disposition of Blood may contribute its share remotely; therefore they that have a Chacochymick and foul Body, are most prone to these Symptoms. And so does tenderness of years, because their Bodies are not sufficient for this action. A sedentary Life contributes much: wherefore this Disease is not so familiar to Country and Laborious Women.

Preternatural things likewise, do much promote this Disease, through Ill conformation, Solution of Unity, &c. So any *Viscus* not doing its duty, and corrupting its proper Aliment and Ferment, may transmit such hostile Particles to the Stomach. And sometimes the Diseases of the Husbands, especially such as are Subject to Vomiting, may contribute something,

since that may very well be done, by Communication of spirituous Particles in the Seed.

What Causes may be assigned from Non-natural things, we shall give you, when we treat of Diet.

§. 13. Cause of Longing.

I Question not but Longing may be Caused by an Acid, communicated by the Mass of Blood, or other humors to the Stomach: and I have observed it in several Women who have not been with Child. This Foreign Acid Ferment, therefore by affecting the Nerves of the Stomach, occasions an unusual Appetite therein, namely of things that are not Aliment, such as Stones, Chalk, Corn, Earth, Lime, &c. because by taking of these things the Acid is saturated.

Now the reason why Women with Child are troubled with this Disease, is, because the Fermentations of the Blood are much altered by the Spirit of the Man's Seed, and a Foreign Acid Ferment is communicated to the Stomach: And so it happens, that these Fermentations do much alter the Thoughts and Appetite. But there is one reason especially, because Women (who at all times do more follow their inclinations than Men, and whose Souls do not curb such thoughts) think, that when they are with Child they may do any thing. I find even my self, that I have a strong desire to some one sort of Meat, and this can proceed from nothing else, but that some peculiar Ferment does in some certain manner affect the Nerves, so
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that such a Meat is represented to the Soul. Most certain it is, that some peculiar motion is made in the Nerves of the Sixth Pair, which is the Cause of Perception and Depravation of judgment.

§. 14. *Cause of Abortion.*

ABortion, according to the Galenists, arises either from excess of Blood, and a too great Afflux of it then to the Womb, or from defect of it in the Mother to nourish the Child, and from other remote Causes, which shall be hereafter mentioned.

§. 15.

SPIRITUS says, the Cause of Abortion is either a *Plethora*, by reason whereof the *Fetus*, sticking but loosely to the Womb, is often expelled, when abundance of Blood seeks an Outlet, and finding it in the Womb, that cannot bear its Violence. He doubts not likewise, but Abortion may happen from want of Blood. Among external Causes he blames, too violent motion of the Body, especially Dancing, Riding, reaching out of the Arms, because by the motion the Child in the Womb is shaken, whose Bands (that is, the *Placenta* sticking to the Womb) if they be loose, are presently unfastned, and broken, parting from the Womb, the Child and Secundine forcing a way out. He also proves both by reason and experience, that Abortion is often caused by the Mothers falling. So daily experience shows, that it is caused by a great Fright,

from care of Mind, sadness ensuing, and from Anger: For in Anger, the Soul is strangely disturbed, and all the Actions both Animal and Natural are much hurt, whereupon no less but a far greater Perturbation of all the Functions in the *Fetus* does follow, which among several other things may occasion an Abortion. He also blames excessive Watching, inasmuch as it wastes the strength, and so the Child by degrees wastes; and he finds fault with excessive heat of the Air, a violent Looseness, bloody Flux, and any notorious loss of Blood.

So, according to him, hæmagogue remedies may occasion Abortion, if either Imprudently or Maliciously they be given, during gravidity: Such are plentiful Venesection, especially in the Foot, violent Purgers taken in great quantity, and especially sharp ones.

Thus likewise the excessive use of Spiritous things, inasmuch as they dissolve the whole Blood, and facilitate the Flux of it by the Womb, may easily cause Abortion; also the bad internal conformation of the Mothers *Abdomen* is apt to cause Abortion. He refers hither a Mole, or a Living and a Dead Child being together in the Womb, the one forcing the miscarriage of the other.

§. 16.

WE do judge the Causes of Abortion lie both in the Mother and the Child. In her as she is miserably afflicted by the Non-naturals, and the Preternaturals acting in a various manner. In the Child, inasmuch as it either of it self, or by accident suffers some

great

great mutation, and through a bad and preternatural disposition endeavours its exit. So the Proximate Cause lies sometimes in the Womb, when it some way or other, either by a *Pletthora*, by other inconvenient things, or by an excessive influx of animal Spirits, is irritated, and sometimes spasmodically contracted, to the exclusion of what is contained in it: for as in Vomiting the Stomach is offended, so in Abortion is the Womb to the Exclusion of the *Fetus*.

Also any grievous Disease of the Child, whensoever it arises, may cause Abortion, inasmuch as the Child may then easily be excluded by the Mother who is well. So it often happens, when the mothers *Abdomen* is not rightly constituted, either tough or hard, not enduring a convenient Distension, that the *fœtus* is excluded. To these may be added a bad Conformation of the Womb, if the carnosus Substance be either too thick, or callous, if the capacity of the Womb be too little, so that it cannot sufficiently be extended, or if there be too great a laxity in the Womb; all these things may cause Abortion.

There are other Causes also of Abortion, when the Mother has lost her Strength by a Disease either present or by past, to wit. a Fever, Dropsie, *Scirrhus* of the Womb, *Erysipelas*, Inflammation, Abscess or Cancer, whereupon I question not but the Child by consent is strangely disaffected.

Sneezing, Coughing, Vomiting, Shouting, when they are frequent, and violent also, endanger Abortion, inasmuch as the strength both of the Mother and Child is wasted thereby, and the Muscles of the *Abdomen*

being strained do press upon the Womb, and so do often force an Exclusion of the *Fetus*, though Immature.

And so a Mole, sticking faster to the Womb than the Child, with its weight presses downwards, and sometimes forces away the true Child.

To the Procatarctick Causes, which much afflict the Mother, and by consequent likewise afflict the tender *Fetus*, we refer those things, that Physicians call the Non-naturals.

And in the first place the *Air*, which if its heat be too violent either by the Sun, Fire, Bath, or Stove, the Womb may thereby be stimulated to the excretion of the conceived *Fetus*.

The abuse also of *Spices and Spirituous things*, and of *Menagogue Medicines*, is very prejudicial, all which things contain in them volatill Salts, which may easily put the Blood in fusion, and disturb the animal Spirits, and so are apt to cause Miscarriage. In this case Strong and Inebriating Drink is to be condemned. Wherefore the Angel, *Judg. cap. 13.* says to *Manoah's Wife*, who bore *Sampson*, Behold now, thou art Barren, and bearest not: But thou shalt conceive and bear a Son. Now therefore beware, I pray thee, and drink not Wine, nor strong Drink, and eat not any Unclean thing. But let Women especially forbear Spirit of Wine; for many sad examples show, that this has caused Abortion. Sometimes fasting also has occasioned it, and excess in Meat and Drink. And so has the desire of Meat, which could not be procured.

Violent Motion also, as Dancing, Riding, either on Horseback or in a Coach,

Coach, or any violent jogging of the Body, lifting heavy burthens, a bruise of the Belly, as I had an instance not long since, may easily occasion Abortion, inasmuch as the bands of the *Fetus* in the *placenta* are made loose, and the tender *Fætus* is shaken in the Womb, so that the bands at length are forced to give way, and let go the Child. So all excess of Blood may occasion Abortion, while it flows more than needs to the Womb, presses the *Fætus*, and irritates the Fibres, so that afterwards the tender *Fætus* is forced away together with the Blood. A notorious Hemorrhage of any Parts, any excessive Flux of the *Menstrua*, and a Dysentery or Looseness, are able to cause Miscarriage.

Too frequent *Venery* is naught, inasmuch as it makes Lax the Neck of the Womb and other parts, and the Conception already made is abhorrent of it; so that hence Abortion does often proceed. And so the Vessels are made too Lax, by the Flux of the cervical Liquor.

The *Passions of the Mind* act their Parts too, inasmuch as they disturb the animal Spirits, put the Womb often into Convulsions, and so expel the conceived *Fætus*. Among these are Anger, Sadness, Frights at terrible Objects, and on a sudden, which often move the Child, and endanger the Mother. Any violent sound has the same effect, as of Guns and Thunder: So I knew a Woman at *Scomberg*, who in Summer time, if her Child were not seven Months gone, always Miscarried upon hearing Thunder. Any Strong or Sweet smell, as of Amber, Roses, Musk; or ingrateful, as of a Candle's Snuff,

Horns, Hoofs, &c. are apt to Cause some Women to Miscarry. Women do ill also in Lacing and Busking themselves too strait, to keep their Bodies slender, and in shape. For *Hieronymus Mercurialis* observes, that several have made themselves Miscarry by the straitness of their Cloths. This straitness so straitens the Vessels, that it hinders the Circulation of the Blood, and so frequently occasions Obstructions, Tumors, Stitches, Abscesses, Ulcers, Consumption, shortness of Breath, &c. Let Women therefore have a care how they pinch themselves, and let them wear such Cloths, as may be least hurtful to themselves or their Child.

§. 17. Cause of a Mole.

THE *Ancients* material Cause of a Mole is the vitious Seed of both Parents, which they held got into the Womb in the Act, and by the greediness of the Womb is conceived and retained; and by the heat of the Womb hardened. Into which matter, they say, the *Menstruous Blood* does flow by the *Coryledones*, and it is nourished and encreased by that Blood.

§. 18.

Paracelsus says, That a Mole is an *abortivum quid* of the Womb, generated in the Womb.

Some place the Cause of this vitious and abortive Conception, in an alteration of the Seed, and in the deficient activity of the Masculine especially.

§. 19.

AND ~~we~~ say, the Cause of a Mole is the Coagulation of the virile Seed, or only of Blood and a sharp liquor in the Womb, caused usually by an Acid.

§. 20. Prognostick of Vomiting.

Vomiting in Women with Child is seldom dangerous, especially upon an empty Stomach, and without any great disturbance, since the Plastick Spirits are careful of themselves, and only expel that which is already separated, and not fit for the Nourishment of the Child. But be the matter ejected what it will, it is often a comfort both to the Woman and the Child. Hence *Nicolaus Rocheus de morb. mulier.* says, That in the fourth Month longing ceases, partly because the vitious Humours are carried off by Vomiting. *Haferus in Hercule medico l. 7. c. 3.* says, That such Women have very fair Children, because they are nourished with the matter of Blood depurated by Vomiting. But it portends danger, when it comes immediately after Dinner or Supper, carrying of all the Meat, that should turn to Nutriment for the Child, when it exceeds in quantity, or in straining and Motion; for it, as well as any other violent Excretion, may produce Abortion. Yet I know a Woman, that is Mother of eight Children, who for the first three Months cannot eat one Mouthful, but is forced to sustain her self with Drinkables, and often Vomits them up too, and besides this Vo-

miting, when she is with Child, she has a great sense of heat in her Throat and Stomach.

§. 21. Prognostick of Longing.

AS to the Prognostick of Longing, there is no great danger in it, unless it should last long, which might encrease the Cause, or the Woman should give way to it unreasonably, and long for absurd things, which might occasion several Obstructions and Corruptions of the Humors. But sometimes if the Humor be carried in abundance into the Stomach, and be very sharp, it may cause Heart-burns, which may occasion Swooning, and sometimes, but very seldom Death. Women are usually rid of their Longing towards the fourth Month of their time. If it continue longer, it is observed to be dangerous. It is good, if they long for lowre things; bad, if they Long for absurd things.

§. 22. Prognostick of Abortion.

ABORTION, though of it self it be troublesome enough, and weakens Women more than Labour, is often also the Cause of divers other Diseases, Barrenness, Inflammation, Ulcer, *Erysipelas* of the Womb, &c. especially if it happens at the latter end of their time, at which time, because the *Fetus* is big, it is with difficulty excluded the Womb, as an unripe Apple, which cannot be pluckt without

without violence; and it occasions great Hæmorrhages, which are attended with Swooning, *deliria*, and Convulsions. Hence *Aretæus* testifies, that he never saw a Woman recover, who after Abortion fell into Convulsions. Miscarriage is more dangerous of ones first Child, than in one that is used to it. Women of a very tender Constitution are in greater danger than fat Women. Fevers, Palpitation of the Heart, Heart-burn, and other bad Symptoms, make the Case more dangerous.

§. 23. *Prognostick of a Mole.*

A Mole is Salutory, if the Womb throw it out as an useles Burthen, and prejudicial to its self. No Creature, except a Woman, conceives or bears a Mole, as *Aristotle* testifies.

§. 24. *Diet in Vomiting.*

NOW we proceed to the dietetick Cure, which consists in the right use of the six Non-naturals. In Big bellied Women's Vomiting the *Air* especially must be temperate. In Vomiting immediately after dinner and Supper, it is best to eat a little and often in a day of something that is good, so that both the Mother and the Child may get some Nutriment. Peptick Powders are good with ones *Meat*. Let the Patient according to the Nature of the Cause, *drink* cold Water: for some are so averse from Wine, that they cannot endure to

hear of it, because they find a Burning in their Throat after it. But some, if there be an Acid, may be allowed Wine either Sack, or Red, in which Gold, Steel, or red-hot Flints have been quenched. We allow of Meats easie of Digestion, Flesh of Birds, roasted rather than boyled, Pears, Quinces, &c. We have known fat things do harm. How other things may be directed and the use of them managed, will appear from what shall be said hereafter.

§. 25. *Diet in Longing.*

IN Longing the desired Food must sometimes be allowed, if it can be done without danger of Life, the mind must be fortified with divers Reasons, and must be diverted from these and other improper things.

§. 26. *Diet in Miscarriage.*

IN a Miscarriage the *Air* must be temperate, and without Heat: If it be over hot, it must be amended by strewing cool things on the Floor, and by holding grateful Scents to the Nose. Any ungrateful Scent is hurtful. A little *Meat* must be given, easie of concoction, the Bread must be of Wheat dipt in Juice of Berberies, Pomegranate Wine, Quince Wine, &c. Forbear all salt, and sharp Meats, for I have known too great use of Mustard occasion Miscarriage. Avoid Acids, over-moist things, and Aromatics. Give Broths
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tempered with Sowre things. Avoid Drunkenness, either with Wine or its Spirit. Sleep and Rest are good. The Mind must be serene and quiet. Anger and Fright are as bad as Death. We mentioned the rest among the Causes.

The same things in a manner must be observed in a Mole.

§. 26. Cure of Vomiting.

NOW we will proceed to the Pharmaceutick Cure. In the Vomiting of Women with Child, the *Galeniſts*, and chiefly *Reverius*, commends Venesection. He has these words. "And Experience has taught, that Vomiting, which afflicts Women with Child in the first Months of their Time, is exasperated, by Purging and much relieved by Bleeding, yea, quite removed, if it be repeated every Month till the Symptoms cease. He also advises several Stomachicks, which we have already mentioned in the Chapter of Vomiting, c. 1. l. 3.

§. 27.

AND so *willis*, when an impure and rancid Blood, ever and anon supplying new Stores for incongruous matter to the Stomach, does cause an emetick Disposition, testifies, That Vomiting in Women with Child is cured by frequent bleeding. *Pharmaceut. rational. Sect. 2. cap. 3.* He breaths a Vein, not in the Foot, but in the Arm. And he commends divers Stomachicks mentioned in the third Book.

§. 28.

Sylvius commends moderate austere Medicines, such as Plantain, Housleek, Myrtle, Knot-grass, Bistort, Avers, red Roles, &c. crude Alum and all the *terre Sigillatæ*. Among chymical things he commends Spirit of Alum, Vitriol, *Spiritus Salis dulcis*, &c. For fixing a volatil Bile he uses subaustere and acid Medicines, but especially Sauces, to which end he esteems volatil oily Salts, which promote the Fermentation of the Food in the Stomach.

But if vitious humours offend not only in Quality, but in Quantity, he says they must be diminished by convenient Purgatives; but he slights sharp Purges, and therefore strong ones; and admits only of Lenitives. He also commends Opiats and Narcoticks in this Case, as things that both temper the Acrimony of the Humors, correct their vitious Effervescence, and dull all Sense, and so stop all excessive Vomiting sufficiently. To this end he gives *Laudanum Opiatum*, Treacle, and *Requies Nicolai*. And so he uses divers Externals in Form of Oyls, Plasters, Cataplasms, Powders, Bags, &c.

§. 29.

IN the Vomiting of Women with Child, according to our Judgment we ought to proceed cautiously, lest we do more hurt than good. This is *Platerus* his Caution, and must be carefully observed. If Women with Child be troubled with Vomiting, such Medicines

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must be omitted as incommode them: for the vomiting that we now treat of, often requires no Cure; and so the Physician by doing nothing does well, when things that should be discharged are discharged by Nature, and Women find no Inconvenience from it: for there is no Loss of Strength, if they are better after it; especially in morning Vomit, which provident Nature procures for her own Conservation.

But the Vomiting that manifestly hurts the Body, weakens the Child and the Mother. That which is excessive and threatens Danger, lest it should cause Abortion, indicates its Removal, and sometimes Mitigation, which the Physician does by checking the Motion, by diminishing, tempering, altering, and enervating the irritating Causes; by strengthening the Placick Virtue, and by quieting the Spirits. And when he would do this, he fetches his Remedies from the common triple Store-house.

In Chirurgery, the first that offers it self, is, Bleeding, which we do not allow to be administred, unless in the middle months, for fear of miscarriage, but instead of it we allow of cupping and scarifying. Issues, Leeches, and Blisters deserve Praise in this Case; and rubbing the Arms and Legs, after Meat especially. This Rubbing is commended by *Mercurialis de Morbis Mulier. l. 1. cap. 4.*

From Pharmacy Vomits are taken; but because they are vexatious to Patients, they may be omitted; yet I gave of *Tartarum emeticum* one Grain, with Salt of Wormwood two Grains, and *Theriaca Calestis* one Grain, to my

own Wife, when she was three Months gone, with good Success. Gentle Purgers and Abstergers of the Ways may be subjoyned. But it is safer to proceed with Absorbents, especially if Heat be joyned with it, the Dose whereof the Quantity of the morbid Acid must determine, and the Quality or corrosive Acrimony, that vellicates the Fibres of the Stomach, as it is stronger or weaker.

Among appropriate Absorbents, beside their general Use in imbibing a morbid Acid, there are some that have a specifick property, as Hazle. Mistletoe has an antiepileptick Virtue, Ash Bark a diuretick, Winter Bark an antiscorbutick, Martial Medicines a cachectick, Jovial and Saturnine an antihectick.

In this Case therefore these things are proper, Crabs Eyes, Harts-horn, coats of Hens gizzards, Unicorns horn, *terra Catechu*, Nutmeg, Ivory, Martial Medicines, Bole Armenick, adding Oyl of Cinnamon, Mint, &c. Astringents also are good, such as Tormentil, Bistort, and *Terra sigillata*. And things which refresh the Spirits, such as Castor and all Balsamicks, especially *Tinctura Terræ Japonicæ* is an excellent Medicine in this Case with Essence of Opium. Here is a Receipt for Vomiting, where there is also Heat;

Take of Crabs Eyes prepared, Chalk each one Scruple, Nutmeg half a Scruple, Harts-horn prepared one Scruple, *Theriaca calestis* one Grain. Mix them. Make a Powder, and divide it into two equal parts.

And

And if the Heat be great, these Tablets following are proper;

Take of *Species diacretæ Minsch-ii* fix Drachms, or of Chalk two Drachms, burnt Ivory one Drachm, Fossil Unicorn, Crabs eyes prepared, red Coral prepared each two Scruples, Nutmeg one Drachm, with a sufficient quantity of Sugar make Tablets.

Powder of Brick, Spirit of Mastich, and of Vitriol of Mars are generous Remedies;

Take of Cinnamon water made with Quinces, Mint each one Ounce and an half, Spirit of Vitriol of Mars twenty five Drops, Mastich two Drachms, *Laudanum opiatum* one Grain, Syrup of Mastich or of *Agræsta* six Drachms. Make a Mixture to be taken by Spoonfuls.

If the Vomiting be like to endanger Miscarriage, you may mix Opiates with other Medicines. Our Hysterick *Laudanum* given in Form of Pills is an excellent Remedy: for these Pills tarry long in the Stomach, are grateful to it, and so exert their Virtues the better. All Balsamicks are good, and Chocolate, Balsam of Peru, which are mentioned before in Vomiting, especially volatil Oily Salts joyned with Opiats, *Laudanum cydoniatum Hoffmanni* and *Tberiacæ cælestis* are good. Curran Wine taken by Spoonfuls often does the Business.

Loathing of ones Meat and Nauseousness are removed by the

same Medicines in a manner, here Balsamicks are more proper.

Externally Plasters, Unguents, Balsams, Cataplasms, and Bags may be applied both to the fore and back part of the Stomach, according to *Avicennæ's* advice.

If there be a Loathing of Meat, *Oleum Cratonis* will be good applied to the Pit of the Stomach. Here also *Emplastrum stomachale Cratonis cum racamahaca, de crusta Panis, de Caranna cum Balsamo Peruviano*, a Cataplasim of Leven, Oyntments of Oyl of Mastich, Nutmeg, Quinces, Wormwood, Orange Pill, and a thousand other things will be proper. *Louise Bourgeois de obstetric, l. 4. c. 30.* commends the applying of an Ivory Plate to the Stomach as a certain Experiment.

Among Empirical Medicines these following excel.

Johannes le Bon in therap. Puerper. p. 6. highly commends a Decoction of the larger Chamomil.

Herlicius de cura gravidar. orders in a hot Cause to put the Hands and Feet in cold water; and in a cold Cause in hot.

Camerarius commends Quince Wine.

Forestus commends the eating of Services.

Ludovicus Mercatus tom. 2. l. 3. c. 11. highly extols this following;

Take of Aniseeds, Citron Pill each one Drachm and an half, Powder of red Roses, red Coral, prepared Pearl, *Electuarium de Gemmis*, each one Scruple, Sugar what is sufficient. Make Tablets with Steel water.

He also commends Bole Armenick or *terra sigillata*, given with Sugar of Roses.

§. 30. *Cure of Longing.*

THE Salivists bleed in Women's Longing; but sparingly. Then they give a gentle Purge, and divers Strengtheners of the Stomach, according to the Nature and Disposition of the Patients Body.

§. 31.

SPLEENUS, when Women with Child long for a large Quantity of good Meat or Drink, is for allowing it them. But if they long for unusual things, and they will not be satisfied, they must be persuaded by Reason. He commends aromack and spirituous things, as they restore the animal Spirits. But above all he commends Tincture of Cinnamon, made with rectified Spirit of Wine: and for such as cannot bear the use of that, they may take Nutmeg or Cloves.

§. 32.

I Think Longing may be cured very well with Medicines that imbibe an Acid, that check the vicious Effervescence in the first Wayes, and that carry them off by *Epicrasis*. Therefore if Women long for Chalk, Lime, Sand, or such things, if they are not excessive, they may be indulged: for it does them more good than hurt. But if their longing for absurd

things last long, and they grow worse you may very well have Recourse to Precipitants, which given in a due Dose do help longing Women by Saturating the Acid in the Stomach, that is of a peculiar Taste: For by these Imbibers alone I have cured a Longing and a great heat of Stomach withal. *Frid. Hoffmannus* highly commends Magistery of Pearl. But they must not take too much of these Precipitants, otherwise by avoiding one Mischief they fall into another, as loss of Appetite, shortness of Breath, Cachexies, slow Fevers, and innumerable other Evils. Therefore Maids do ill in eating Chalk and other Precipitants, to make them look Fair, because such things hinder the first Digestion and all that depend thereupon.

With the foresaid Caution therefore Specifick Absorbents are proper; such as Chalk, burnt Harts-horn mixt with Nutmeg, and with far better Success if they be made up into an Electuary with Conserve of Syrup of Oak-buds, I have often done the Business with *Oleum tartari per deliquium* alone, giving a few Drops frequently. *Hoffm.* wonderfully commends philosophical Spirit of Vitriol, and a Decoction of Chamomil, which he prefers before all other Medicines. I have experienced the following Medicines;

Take of Orange Water drawn with Sack, Rosemary each two Ounces, Essence of Orange Pill, *Oleum Tartari per deliquium* each one Drachm, Syrup of Citron Pill, one Ounce, Make a Mixture, and take a Spoonful at a time. Or,

Take

Take of Water of Mint, Rosemary each two Ounces, *Aqua Vitæ Matthioli*, Tincture of Cinnamon each one Ounce, Spirit of Sal Ammoniack twenty Drops, Oyl of Mint eight Drops, Syrup of Mint one Ounce. Mix them. Or,

Take of any volatil oyle Salt one Ounce. The Dose is thirty Drops in Muscadine or Canary or any other generous Wine. Or in Form of an Electuary.

Take of conserve of Mint, Rosemary Flowers each one Ounce and an half, Orange and Limon Pill candied each half an Ounce, Powder of Cardamom, Cubebs each three Drachms, Oyl of Mace two Drops. Mix them. Make an Electuary. The Dose is the Quantity of a Chestnut, three or four times a day.

Decoctions of *guajacum*, *Sassafras*, *China*, and *Sarsa* are good. If the Appetite be excessive, then we must abstain from Acids and keep to Spirit of Sal Ammoniack. Starch also and pultaceous things are good in this Case.

§. 33.

AMong the Empirical Medicines take these following. If Women have a depraved Appetite, *Ægineta* commends the Drinking of old and odoriferous Wine, and water of Shepherds Rod, especially after Meal. He also commends Dill steeped in Wine.

Brendelius says, that Starch cures Longing.

Jul. Caesar Claudinus commends this following;

Take of Mustard half a Scruple, Pigeons Bones burnt and powdered one Drachm and an half, Seed of Purslain one Drachm, Cinnamon two Scruples, juice of Quinces two Ounces, white Sugar three Ounces. Mix them in a double Vessel over the Fire. The Dose is half an Ounce every other Day in the morning.

Job. Rhodius Observ. Medic. Centur. 2. pag. 97. has observed Longing to be cured by the Flux of the Hemorrhoids.

Schroder commends sowre Pomegranates and Vine leaves.

Trotula says, If a Woman with Child long for ill things, give her Beans with Sugar.

Arnoldus Weikhardus uses the following external Medicine;

Take of Citron Pill, *Acacia*, *Calamus Aromaticus* each half an Ounce, Leaves of Turkish Bawm two handfuls. Boyl them in Wine and bruise them and put to them, when bruised, of Oyl of Nard, and Mastich each a like Quantity. With the Crumb of brown Bread make a Cataplasim, and apply it hot to the Stomach.

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§. 34. Cure

§. 34. *Cure of Abortion.*

IN fear of Abortion the Ancients let Blood, and where there is a notable Cacochymy, repeat gentle Purges; in the middle Months especially, and now and then all their time of being with Child they give divers Astringents and Strengtheners to prevent Miscarriage, several of which were described in the immoderate *Menses*. When they are not with Child, they say, all ill dispositions of Body, which used to cause Miscarriage, must be removed; such as Plethory, Cacochymy, and peculiar Diseases of the Womb, for instance, Intemperature, Inflammations, Ulcers, &c. and divers external things, which you may see in *Riverius c. 17. de Abortu*.

§. 35.

Sylvius varies his Cure, according to the Causes. In a Plethory therefore he orders diminution in time, sometimes immediately after Conception, Excessive motion of the Body, Falling, Frights, too much Watching, excessive heat of the Air, *Diarrhæa*, *Dysentery*, and *Hæmorrhage*, some of them must be forborn and others cured. They must have a care of all enormous letting of Blood, and violent Purges, but especially of such Medicines, as used to promote the *Menstrua*. And all strong drink must be avoided.

But Abortion, which proceeds from a bad Conformation of the Mo-

thers Belly, or from another Child, in his Opinion, can scarce ever be cured.

When part of the after burthen remains in the Womb after Miscarriage and causes a continual efflux of Blood for some Months, he has often had success in the following Apozem, by giving three Ounces of it twice or thrice a day;

Take of root of Bistort two Drachms, leaves of Majoran, Penny-royal each one handful. Boyl them in Water, and white Wine what is sufficient. In twenty Ounces of the Colature, dissolve of Syrup of Mugwort two Ounces, Cinnamon Water half an Ounce. Mix them.

§. 36.

IN our Opinion, to prevent Abortion (for sometimes it cannot be prevented, as appears from discouraging the Causes) first of all the humors must be reduced to their Natural state; and if there be any disorder in the animal Spirits, it must be rectified. If the Woman be Plethorick, she may be let Blood about the middle of her time. All diseases in the Womb, that are apt to Cause Abortion, must be cured before. The Medicines that are given, must strengthen the Mother, the Child, and the Plastick Spirit. To which purpose kindly Balsamicks, Aromatick, Spirituous things, and gentle Astringents are good, such as tincture of Corals, *terra Japonica*, *liquor stypticus balsamicus*, *tinctura antiphthisica*, Magistery of Coral, Ivory, *Specificum cephalicum*, Nutmeg, Bistort root,

root, Crab's Eyes, Cloves, Mace, Cinnamon, *aqua epileptica*, *vita mulierum*, *cordialis* H. Saxon. water of Cinnamon, and its tincture, and other things. We will give you some receipts. If therefore it be feared, that a Woman may miscarry upon a fright, it will be proper to take frequently a spoonful of the following liquor;

Take of *aqua epileptica* Langii, *vita mulierum* each one Ounce and an half, Magistery of Coral, *Specificum cephalicum*, emerald prepared each half a Scruple, Syrup of Cinnamon six Drachms. Mix and give it. Or,

Take of prepared Ivory, *pulv. marchion*. Powder of Pearl each half a Scruple, *trochisci de spodio* six Grains, distilled Oyl of Nutmegs two Grains. Mix them. Make a Powder. Divide it into two equal parts for twice taking.

Sennertus has the following Powder;

Take of Magistery of Coral one Drachm, prepared Pearl half a Drachm, shavings of Ivory one Drachm, Mastich half a Drachm, grains of *Chermes* one Drachm, *manus Christi perlat.* two Drachms. Mix them. Make a Powder.

If Abortion be feared from Swooning, this following will be proper;

Take of *aqua cinnamomi*, *boragina-ta*, *cordis cervini*, *cordial*. H. Saxon. each one Ounce and an half, tincture of Coral half a Drachm, Syrup of Pomegranates six Drachms. Mix them. Give it by spoonfuls.

If it come from Anger, Antispasmodicks, Antiepilepticks and Bezoardicks will be proper in this case: for instance;

Take of Water of Black Cherries, Linden tree Flowers, *aqua epileptica* Langii each one Ounce, Syrup of Coral, Peony each six Drachms, tincture of Coral one Drachm and an half. Mix them.

You may also give Magistery of Ivory, and Elks hoof.

If it come from a too great Flux, then very Astringent things, and Stomachicks will be proper, and sometimes Opiates, and Cydoniates, *laudanum cydoniatum Hoffmanni*, and the skin of a Hens Gizzard. But in general *pulvis contra abortum Augustan.* and Magistery of Coral with juice of Citron, and other moderate Astringents are good against Abortion.

If a Woman always Miscarry, let her take this following;

Take of *aqua embryon.* two Ounces, Nutmeg one Drachm and an half, *Saccharum resatum*, or *perlatum*, as much as will make it grateful, Or,

R r r 4

Take

Take of Conserve of red Roses one Ounce, *condit. cortic.* *citri* half an Ounce, *confectio Alkermes* *incomplit.* two Drachms, *species de Hyacintho* two Scruples, *pulvis contra abortum Augustan.* two Drachms, *Marchion.* two Scruples, emerauld prepared, red Coral prepared each one Drachm, Pearl prepared half a Drachm, Ivory prepared without Fire one Scruple. With the liquor of candied Nutmeg make an electuary. Let the Patient frequently take the quantity of a Chestnut.

Tinctura granorum chermes Zwelferi, about thirty drops at a time, is an Herculean remedy.

The following mixture is to be given a Spoonful at a time;

Take of Water of Mint, Orange pill each two Ounces, *aqua vite mulier.* tincture of Cinnamon each six Drachms, red Coral prepared two Scruples, distilled Oyl of Mace five drops, Amber-grise two Grains, Syrup of Orange Pill, Limon Pill, each what is sufficient. Mix and give it.

The Italian Women use tincture of Roses.

Capivaceus uses Powder of *coccus infectorius* with a little Maltich in a reer Egg.

In Miscarriage, where there is also a Flux of Blood from the Womb, this following will be proper;

Take of Maltich, *terra sigillata*, white Frankincense each one Scruple, Dragon's Blood, Bole Armenick each half a Drachm. Mix them. Make a Powder. The Dose is a Drachm.

Externally Cataplasms of white Bread and Sack, sprinkled with Powder of Cloves, Nutmeg, Cinnamon, Milt, Majoran, flowers of white Roses, *balauftia* and the like, may be applied, or Astringent liniments, adding oily Aromatics: for instance;

Take of *Unguentum Comitisse* one Ounce and an half, Oyl of Maltich three Drachms, Nutmeg deitilled six Drops. Mix them.

Lud. Bourgeois has a fomentation of leaves of Cypress, Majoran, Rosemary, Mint, flowers of Chamomil and Pilewort. Also a bag may be made thereof, which may be sprinkled with *aqua vite mulierum*, or some Strong Water. The same Person has also an excellent Plaster;

Take of *aqua vite mulierum*, or *balsamus embryonis*, or Sack two Ounces. Let it be applied hot to the *Pubes*, either with a Crust of Bread, or with Clothes.

The

The grievous Symptoms, as Pain, Gripes, &c. must be mitigated with Clysters, Electuaries, and Opiates, and a Woman must have a care of such things, as cause Abortion.

§. 37.

These following we reckon among empirical Medicines. *Ful. Caf. Baricellus Hort. Genial.* p. 308. says, That medlar Wood hanged about ones Neck prevents Miscarriage. *Pet. Forestus* commends the Stone found in the Womb, Heart, or Guts of a Stag, for an amulet. *I. Hartmannus* commends the drinking of the juice of a Crey-fish in good Wine, once or twice every Month.

Job. Heurnius magnifies the following Cere cloth applied to the Belly, and os sacrum;

Take of Blood-stone, white Frankincense each half an Ounce, Maltich, *laudanum* each one Ounce, *Sumach* two Drachms, *Galbanum* half an Ounce, Pine resin what is sufficient. Make a Cere-cloth.

Jacobus Hollerius writes, that in Scotland the Gentlewomen there do often apply a Cake of *Tansy* to the *Pudendum* with good Success, and to make it smell the stronger, they rub it in their hands, or roast it a little in Embers.

Dom. Leo. commends the skin of a Hedge Hog burnt, and drunk in Wine.

Philippus Mullerus miracul. chymic. l. 5. for Abortion, commends, the skins of Hens Gizzards, dried and powdered, and a little given every Morning fasting in Wine.

Riverius commends the two following Medicines;

Take leaves of Gold, *No. xij. spodium* one Drachm, the Traddles of three Eggs, that are not wind Eggs. Mix them well, till the Gold be broke into very minute parts, then dissolve it in half a Glass of white Wine, give it in the Morning fasting, for three days, and apply the following Platter;

Take of *Olibanum* powdered three Ounces, five Whites of Eggs. Stir them well over the Coals; keeping always stirring, lest they clot. Add a little Turpentine. Take it up in Tow, and apply it as hot as she can bear it to the Navil twice a Day, Morning and Evening.

Daniel Sennertus, advises a Woman, that is like to miscarry, to wear an Eagle's Stone upon her Arm, and under her Armpits.

Gottfried Welsch says, That to put a little Leven into the Navil, prevents Miscarriage. And so do the ashes of a Hedge-hog, made into the form of an Unguent with Oyl of Maltich, and applied to the *Pudenda*. And he gives inwardly the Powder of a Childs Navil-string; which is made thus;

Take

Take a piece of the Navil-string, or that part, which after it is cut, sticks to the after burthen, wash it in Wine, and calcine it in a new Pot open in an Oven. Half or a whole Drachm of the Powder, with half a Scruple of Cinnamon and five Grains of Saffron, may be given in Sack and Mugwort Water.

§. 38. *Cure of a Mole.*

We will now briefly give you the Cure of a Mole. If then you are certain that there is a Mole, that is, a concrete Lump of Blood, you must do all you can to expell it: To which purpose you may give strong Purgers and Menagogues: for instance;

Take of *massa Pilularum fetidarum* one Scruple, extract of trochiscs of *Albandal* three Grains. With essence of Savine, make Pills for once taking.

And forcing Clysters may be given, made of Savine, and Coloquintida tied in a Rag, the *Scorie* of *Regulus* of Antimony, &c. *Essentia ad Menfes* and Essence of Savine about 40 or 50 drops is an excellent remedy. A fume may be made of Powder of Anise and Cumin seed each three Drachms, Savine two Drachms, which may be received through a Funnel. An Ointment may also be made of Oyl of Coloquintida and *cheiri*. But do not use these things, ex-

cept you are certain of a Mole. This following is good for the same purpose;

Take of Water of Cinnamon one Ounce, bawm two Ounces, Essence of Saffron six drops, Oyl of Amber half a Scruple, *Venetian Borax* one Scruple. Mix and give it.

Philippus Grulingius says, there is no such successful secret as the Powder of Secundine given in Mugwort, madder, or Penny-royal Water.

Massarius gives one Drachm of an Oxes Gall as a secret to expel a Mole.

Eustachius Rudius l. 2. cap. 48. says, this is a very effectual Medicine to extirpate a Mole;

Take of Oyl of Sweet Almonds half an Ounce, *Sesamum* or Dill one Drachm, Sugar one Spoonful, root of female Fern one Scruple, Oxes gall one Scruple. Give it a Woman in a Bath.

Guerner. Rolsinc. epitom. med. says, "Some magnifie humane Secundine, and a Sheeps and Goats Secundine, powdered and given in Wine, for forcing away a Mole.

Jacob. Ruff. commends the following Pills;

Take of Seed of *nigella*, *Aristolochia rotunda*, dittany of Crett, Seed of wild Cresses, Savine, *Sagapenum*, Seed of Rue, Gum Ammoniack, *thymiana*, Madder, Myrrh, Castor, each one Drachm. With

With juice of Horfe radish and Honey make Pills. The Dose is from half a Drachm to a Drachm.

§. 39. Cure of the Cramp.

IN the Cramp of Women with Child these things are proper; *Specificum cephalicum*, Elks hoof, Sea-Horse tooth, and other Antiepilepticks already mentioned in the Cramp. And outwardly *Unguentum Spasmodicum Minschkei*, one Ounce, Oyl of Worms two Drachms, *aqua articulorum ad*

extra one Ounce and an half, Spirit of Worms one Ounce and an half.

A Ring may be made of an Elk's hoof, or a Sea-Horse's Tooth.

§. 40. Cure of the Sciatica.

IN the *Sciatica* all things are good, before mentioned in the Gout.

And the Cures of the rest of the Symptoms may be sought for in their proper Chapters.

CHAP.

C H A P. V.

Of difficult Travail, a dead Child, and breaking of the Water.

§. I.

A Woman above all Creatures is tormented most in bringing forth her young. Wherefore *Medea* in *Euripides* protests, she had rather engage in Battel thrice, than bear a Child once. But the Great GOD, *Gen. 3.* hath laid this Calamity on the Female Sex.

Description.

Difficult Travail therefore is, *when the Child cannot be born without Pain, and violent throws, and danger both to its self, and the Mother.* Now before a legitimate Birth the Water contained in the *amion* must break, but neither the *os pubis*, nor the *os coxendicis* dilates, as many, contrary to experience, have thought. For the learned Anatomist *Georgius Francus* in his *Satyra Medica*, shows by experience, that in Travail the *ossa pubis* remain close knit,

And Travail is called difficult from the Causes that make it so,

from the concomitant Symptoms, and from the event.

§. 2. *Part affected.*

ALL Authors take the Womb to be the Part affected, which they say is either affected, 1. By it self, as by its proper fault in temperament or Conformation: Or, 2. By consent, namely, when the whole is either diseased or faint.

§. 3. *Diagnostick.*

Signs of difficult Travail are known partly by the Woman her self, partly by the Midwife and those that are by. The length of time, Pain and Throws, &c. do declare it. For lingring, and languid pains, which terminate rather in the Loins and Belly than in the Womb it self; and, 2. Grievous ones, which do not at all bring the Child forward, show the Travail to be difficult. But what the Cause is, it behoves the Midwife to enquire, and relate it to the Physician. Since custom has made it usually Womens Work.

Travail

Travail also may be judged difficult from the preceding Causes, if namely all things have not gone well with the Woman, the Child, or the Womb, if she have used to have hard labour, or if she be too Young or too Old.

The natural and common Signs of Travail, are Pains in the Loins, the falling down of a Weight to the bottom of the Belly, quick Respiration, and other Signs. And whatever unusual Signs happen either in excess or defect, argue the Travail will be difficult. And two do it especially, 1. Want of pain, whereby nature excites the animal Spirits to force the Child away; that is, when the pains are either none or too weak, a long time in coming and tending backwards rather than forwards. Wherefore *Aristotle, 3. histor. animal c. 9. says, Women that are griped in their Belly, are soonest delivered, they that are pained in their Loins have hard Labour, and they that are pained at the bottom of their Belly, have a quicker.* 2. Breaking of the Water before the usual time. For it is a peculiar Sign of hard Labour, when a great quantity of Water comes away, before Travail, because the passage is therefore the straiter.

Travail is reckoned difficult, if it last above four and twenty hours, and if there be any grievous Symptoms in Travail, or pains after it.

In regard of the Mother whether she be weak, or broken with Diseases, she is best able to tell.

In regard of the Child, Labour is known to be difficult, if

it stir seldom or weakly; for it is in danger of being strangled, or of dying: Or if the *Menses* or Blood, or after-burthen come first: If the Mothers Breasts, which were full, extenuate on a sudden, or if much or watry Milk run out, these things show the Child is not well, according to *Hippocrates Sect. 5. aph. 2.* If there be twins, the Labour is like to prove difficult. One may know the Child is weak by its crying. The Child is known to be dead, when it quite leaves stirring, whereas before it stirred briskly, and when the Mother finds it rowl to and again like a stone. A Sign hereof is, when the *Pudenda, Abdomen*, and the Nose are cold, and when the whole Body is several times chill; when the Face and Eyes of the Mother are changed in color, clearness, &c. If Milk run out of the shrunk Breasts, when an ichor or any other fætid matter runs out of the *Pudenda*; when there is a Fever, Palpitations, and Fainting: And you may know it by violent precedent Causes, that are apt to kill a Child.

If the way be in fault, the Midwife may find that. You may know, that the Secundine is tough, and cannot be broke, when the throws of Travail continue, and never the less no Water comes: Here is need of help, and the Midwife must tear the Membranes with her Nails.

S. 4. Causes.

§. 4. *Causes.*

BEfore we come to the Causes of a Preternatural Birth, let us consider a Natural. And in this the *Time* and *Manner* of Birth must be considered.

The *Time* of an humane Birth is reckoned by most Physicians to be the end of the ninth Month, after a Woman has conceived, whether the Child be alive or dead. A Natural Birth therefore happens about the two hundred and seventy third Day, or the twenty ninth Week, or the Ninth Month, Solar, not Lunar. There are Births in the seventh Month. So I observed it in a certain good Family, where the Woman brought forth six or seven live Boys in the seventh Month. I have observed that a Child born in the eighth Month may live: for beside several others, my eldest Son was born in the eighth Month, who is now six years old. You may consult *Sylvius* and *Drelincourt*.

It is false and ridiculous, that the Child endeavours its Exit in the seventh Month: Because there is neither Reason nor Experience for it: For Women feel neither Pain, nor any Endeavour in the Child after the seventh month, as *Sylvius* has well observed. And according to him, the Child comes at the seventh Month, when it is bigger than usual, and the Mothers Womb too little, or when the heat of the Air has dried up the Commissures of the *Placenta* and Womb, or upon some other Account. The Natural time of Birth therefore is about the end of the ninth Solar Month.

The *Manner* is reckoned most Natural when the Child comes into the World with the Face downwards, then the Shoulders, and afterwards the whole Body; or if both Hands get out, and then the Head. The *Manner* is also reckoned Natural, if both Feet come first, then the Belly, the Breast, and the Head last.

All that comes contrary, happens either through some Fault in the Mother, or Child, a bad Midwife, an ill Passage, or upon the Account of some external Cause.

And the Mother may be in fault;

1. When she is weak or sick, and her Strength fails thereupon.

2. Labor proves difficult, when the Mother is too young or too old; because in such the Passage is too strait.

3. The Birth is hindred through the Mothers Fault, when she resists her Pains, and in her Travail composes her self badly for it; when she holds not her Breath, nor strains downwards towards the *Pubes*, as the good Women bid her.

4. The Birth succeeds ill, when the Mother is sick of any uterine Disease, or of a Disease in any Parts near the Womb, to wit, a Rupture of the Womb, or if the *Vagina* be closed, &c.

5. It succeeds ill, when the Mother dies in the midst of her Travail; but then the Child is not born, but cut out of the Mothers Belly.

And the Child is in Fault, when either the whole Body, or Head and Shoulders are too large to come out at so narrow a Passage, when there

there are more than one, when they are monstrous, when it is sick and weak, so that it cannot promote its own Birth, when it is ill turned or when it is entangled in the Navil-string, or when the After-burthen is separated from the Womb unseasonably, or comes first; or when the Membranes that involve the *Fœtus* are so tough, that the Child cannot break through; or when the Child is dead, which it often is in the Mothers Womb, either in the very Birth or before it.

Cause of a Dead Child.

THE Cause indeed of the first Death we have seen already, the Causes of the latter may be divers. 1. Some grievous Disease of the Mother, which being communicated to the tender *Fœtus* kills it, the Mother recovering. 2. Some grievous Disease of the Child, whencesoever it come. 3. Want of nutritious Juice and necessary Aliment. 4. Some uterine Disease come in the time of being with Child. 5. Plurality of Children, which occasions the Death of one or both, for the most part. 6. Misfortune from external Causes, necessary or not necessary, a Blow, Fall, Bruise, Wound, Breach of the Vessels and the like.

So the Labour may prove difficult through the Midwife's Fault, or the Women by-standers, if they do not their Duty. Through the Midwife's, if she be ignorant of her Office, or bold and adventurous, and cares not whom she kills or if she sacrifice more to *Bacchus* than to *Lucina*, if she be malevo-

lent. For thus, I dare say, several are killed. *Sanè pol temulenta est mulier, et temeraria, nec satis digna cui committas primo partu mulierem, Terent. in Andria.*

The By-standers may be the Cause, when either they do not at all, or not aright, what the Midwife orders them to do.

§. 5.

AMONG the Non-natural Causes may be reckoned an over-cold and dry Air, to wit, a Northern; for when a Woman with Child has exposed her Body to it, it straitens the Genitals, and hinders them from dilating. And in Winter time Labors are most difficult usually; because the Air then impregnated with a constringent Acid offends teeming Women. So likewise an over-hot Air occasions bad Labor, as it wastes Strength.

External Causes are meats that are cold, moist, acid, salt, austere, bitter, astringent, crude and apt to corrupt, such as horary Summer Fruits eaten immoderately by a Woman with Child. Also drinking cold Drink, when the Body is hot, is bad. I have twice seen a Child killed, and quite mortified by the Mothers drinking Drink cooled with Ice.

Sleep and Rest in excess are bad, and Exercise, which turns the Child before the time. Sudden Passions of the Mind are bad. And so are Excretions suppressed, as the Urine, which when it is not made stops the Child, and so do gross and hard Excrements in the Guts.

The

The vain Astrologers Influences of the Stars signifie nothing in this Case.

§. 6. Prognostick.

ALL difficult Labour is dangerous either to the Mother or the Child, or both; especially if either or both of them be sick, and weak; if the Mother be too young or too old; if the Child come out with one Hand first, which is very bad; if the Child's Neck be entangled in the Navil-string. Difficult Labour is often attended by a Breach of some Vessel in the Breast, spitting of Blood, a troublesome Cough, Dilaceration of the Parts, and the King's Evil, as I knew an Instance at *Hanover*. Some break the *Peritoneum*. Some have Ruptures in the Navil and the Groin. Some have the Sight of the Eye dilated, and loose their Seeing. Some get the Strangury. Some fall lame. Others grow barren. Some have their Bellies deformed with Wrinkles. A Providence of the *Vagina uteri* often happens in hard Labour, because by the Violence of the Pulling it is often forced to follow what it contained, and unless it be gently replaced, it produces several other Symptoms. When the Water has been long broke, the Child is in great Danger; because the Water serves it for Respiration as Air does us: for in Inspiration the Child takes it in, and in Respiration puts it out. Besides, when the Water is gone the Parts are dry, which should be glib, for the easie Passage of the Child.

If the Extremities be cold, a Lethargy, cold Sweat and Faint-

ing, Difficulty of Breathing, *deliria*, Convulsions, Sadness, Despair, Sardonian Laughter, &c. are never-failing Fore-runners of Death. There are good hopes if the Mother be chearful, courageous, if she have Strength, if she sneeze, it is well according to *Hippocrates* Sect. 5. *Aph.* 35. When the Labour is hard, and all things requisite well, we need not despair. A Palsy of one Thigh sometimes remains after hard Travail. Hither belong these Aphorisms of *Hippocrates*. S. 5. *Aph.* 35. S. 5. *Aph.* 46. 55.

§. 7. Prognostick of a dead Child.

Daily Experience shows, that a Dead Child often kills the Mother; because it helps not at all, and unless it come away it causes divers Inflammations and Tumors in the Womb, and in the Parts adjoining, and several Diseases in the whole Body. Yet some Women who are strong and large made, or easily dilated, sometimes escape.

§. 8. Dietetick Cure.

AS for the Diet, the Air must be something warm: and the Cold must be avoided, for what harm it does the Womb and the whole Body of lying in Women we have many sad Instances. Hereby the Blood is often coagulated, and Pains, Gripes, Anxieties, Swoonings, Fevers, and other grievous Diseases are often Bred by it.

In a warm Air all lying-in Women are well: for it disposes them to sweat, which preserves them from Diseases incident at that time. The *Meat* must be such, as is not of a Nature to stop the *Lochia*, nor to provoke them over much: For in this their Safety lies. Therefore all acid, crude, and windy Meat must be forborn. All things likewise are hurtful that are fat, salt, austere, smoak-dried and fryed, and Milk-meats. Pullets, Partridge, Leverets, Veal, Lamb, Chicken-Broth and Water-Gruel with Currans are good. Wine and all strong things are naught for lying-in Women: For it puts them into Acute and Mortal Fevers: whereof I know several Instances.

As to *Motion and Rest*, lying-in Women would do well to keep their Bed for nine days, within which time it is dangerous to rise.

The *Excreta* and *Retenta* must be at their Natural Pass.

The *Passions of the Mind* must be moderate. Let them keep chearful: for Anger and Grief do mischief.

§. 9. Pharmaceutick

Cure.

BEfore I fall upon the Method of Cure, I will premise some things about the Office of a Midwife. A Midwife must be Faithful and Sworn, that she never put a false Child in the room of a true one, nor pierce the Child's Scull with a Pin, nor

tear any thing with her Nail. She must be Pious and Modest, a Widow, and not young, but elderly, or of a middle Age; she must not be talkative, drunken, nor arrogant, not a Scold, nor covetous: She must take Pains and not be decrepit, so as either through want of Strength or Sight, or through the shaking of her Hand, not to be able to do her Business aright. She must be skilled in Anatomy, especially about Women's Genitals. She must know the time of Birth very well, and how to distinguish Pains, and not mistake colick Pains in the Belly for Pains of Travail, nor wandering Pains for constant, and so waste the Womans Strength by putting her on Labour to no purpose. She must by the Magistrate be ordered to be examined by Physicians, before she takes the Office upon her.

If the Child offer it self in a preternatural Figure, let the Midwife take the Advice of a Physician about it. And if the Physician find the Mother weak, he must prescribe Analepticks, that the Mother and Child may be enabled to undergo the laborious Task. For which end, some Wine mull'd with Mace, the Yolk of an Egg, Sugar and a little Saffron will be proper; or a little *Confectio alkermes* may be given frequently upon an Knife's point, the Mothers Navil may be rubbed with Canary, or *Agua Anhalatina*, or *Balsamus vitæ*, or it may be applied with a Tost, or a Spoonful or two of *Balsamus Embryonis* may be given.

You must strengthen the Mother and Child with Cordials, Spirituous,

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and

and aromatick things and volatil Salts, or with the like Internals mixt with Specificks: for Instance;

Take of Water of Rosemary, Orange Peel each one Ounce, *Aqua Vita Matthioli*, Tincture of Cinnamon each half an Ounce, *Confectio Alkermes*, or *Hyacinchi* one Drachm, Spirit of Sal Ammoniack aromatised twelve Drops, distilled Oyl of Mace two Drops, Amber two Drops, Syrup of Mint or Cinnamon six Drachms. Mix them. Or,

Take of *Spiritus Salis aromatizatus*, or *Oleofus* one Ounce, Oyl of Orange Peel, Mace, Amber, each five Drops. Mix them, and let them stand in Digestion. The Dose is about twenty Drops, three or four times a day in Sack or some generous Wine.

The second Intention of the Physician consists in Dilatation, and Lubrication of the Passages. To which end an *Infessus* or *Semiparium* before Labour is good to facilitate it. The noble *Ettmuller* commends this following;

Take of Leaves of Mallow, Marsh-Mallow, Bawm, Flowers of Chamomil each three Handfuls, Mallow, Melilot each one Handful Seed of Line, Fenugreek each three Ounces, Root of Marsh-Mallow four Ounces. Shred them. Let the Woman sit over the Decoction, as long as she can well bear it, every other day, when she is near her time.

When the Sweat is wiped off, let her lie down in Bed, afterwards anointing her Navil and Loyns with a Liniment of Mucilage of Seed of Line, Fenugreek, Marsh-Mallow, Oyl of Sweet Almonds and white Lilies. All fat things are proper in this Case, Rape Oyl, and Fat of Animals, which the Midwife must use. According to *Sylvius* this Fomentation will be proper;

Take of Root of Marsh-mallows one Ounce, Leaves of the same and Mallow each one Handful and an half, tops of Melilot one Handful, Seeds of Fenugreek, Line each three Drachms. Being shred and grossly bruised, boyl them in fair Water, and a quarter of an hour before she goes to Bed, let her receive the ascending Fume; repeat it, till the Virtue of the Plants be gone, and then use fresh ones.

If after Travail either the *Collum* or *Vagina uteri* grow together, the Coalition must be opened in time, and slightly cicatrized.

In a Plethory it will be good to let Blood, and the *Saphena* may be opened.

If the Body be costive, Clysters made with Uterines may be given: for the hard Excrements may hinder the Birth of the Child: for Instance;

Take of root of Marsh-mallow, Mallow each one Ounce, white Lilies, Bryony each half an Ounce, the five emollient Herbs, Flowers of Melilot, Chamomil each

each half an handful, Wall-flowers one Pugil, Seed of Fenil two Drachms. Boyl them in a sufficient quantity of Milk. Add of lenitive electuary half an Ounce, Oyl of balsam-Apple half an Ounce, *species diacastorei* one Drachm, Honey of Roses half an Ounce. Mix them. Make a Clyster.

Volkamerus, the chief Physician of *Norimberg*, commends Oyl of Balsam apple, as excellent to Anoint the Orifice of the Womb.

But when the Membranes are too tough, for the Child to break through, they may be anointed with this following ;

Take Oyl of Nuts, *Venice* Soap each two Drachms. Mix and use it.

Or the Midwife, as was said, may open them with her Nails, or a Knife or Lancet.

If a carnosus excrescence or a wart stop the way, they must first be cured, to which purpose, Oyntment for Warts and other Chirurgical means will be good.

And so other Diseases of the Womb, must first be cured with proper remedies.

When there is an Hæmorrhage by the Womb and Bladder, it must be stopped with Altringents, especially with Opiates, *Dioscoridum*, &c. The heat of the Body must be cooled; and all causes that hinder the Birth, must be removed.

But in this case Forcers or Hæmagogues, which have a specifick property, either alone, or mixt

with other comfortable things, are excellent. The most celebrated by experience is *borax*. Wherefore it generally makes up the *basis* of all Medicines that promote the Birth. I have seen several admirable effects from the following Powder, which is a most Serene Princess her secret;

Take of Amber prepared half a Scruple, *Venice* Borace six Grains, Powder of Hen's Gizzards four Grains. Mix them. Make a Powder. It may be given at thrice, in the following mixture, or in some other vehicle.

Take of Water of Penny-royal, Bawm each one Ounce, *rubr. Danic.* half an Ounce, tincture of *Cassia* half a Scruple, Mix and give it. It may be given also alone by spoonfuls.

The following mixture is famous;

Take of Water of Cinnamon, Penny-royal, white Lilies each one Ounce, Gall of an Eel half a Drachm, Borace, Cinnabar of Antimony each one Scruple, Spirit of humane Secundine half a Drachm, Syrup of Peony six Drachms. Mix them.

I have experienced Powder of *Rhinoceros* horn from six Grains to ten, given several times in Vervein water.

Here also Medicines of Myrrh, especially *flores sulphuris myrrhati*, are good, and Medicines of Amber and other volatil things do the

same. The following mixture, is not inconvenient ;

Take of Water of Motherwort two Ounces, Cinnamon half an Ounce, Borace half a Drachm, Myrrh one Scruple, volatil Salt of Amber half a Scruple, Syrup of Cinnamon three Drachms. Mix them. Give it at twice, or by spoonfuls. Or,

Take of Water of white Lilies, Penny-royal each one Ounce, Cinnamon half an Ounce, Spirit of Soot, Powder of Secundine prepared each one Drachm, Syrup of Cinnamon or Mugwort half an Ounce. Mix and give it. Or this Powder ;

Take of an Horse's Stones dried one Drachm, Borace two Drachms, Cinnamon, Saffron, each half a Scruple. Make a Powder and divide it into three equal parts.

Hoffmannus commends this following ;

Take of Venice Borace one Drachm and an half, *glacies Marie* six Drachms. Mix them. The Dose is from a Scruple to half a Drachm in Cinnamon Water.

Belmont in hard Labor reckons the Liver of Eels, Serpents, &c. as a secret.

When the Water does not come away, a Fomentation of emollient Herbs is good.

When the Water comes too soon, it is good to apply Oyl of white Lilies or sweet Almonds

warm, and a Liniment of the Mucilage of Roots and Seeds of Marsh-mallow, Line, and Fennigreek, drawn with Mallow Water.

In difficult Travail besides vegetables, these things deserve commendation, tinctures of Caltor, Amber, and Saffron, Oyl of white Amber, Man's skull, Harts-horn, Soot, Goat's Blood, fetid Oyl of Tartar ; and Powders of humane Secundine are more effectual, adding trochiscs of Myrrh, or Borace, or a tincture of it, drawn with Spirit of Wine, adding a few drops of Oyl of Savine.

Barthasar Timæus uses this following potion ;

Take of Water of Bawm, Cinnamon, *agua hysterica* each one ounce, Myrrh one Scruple, Saffron half a Scruple. Mix them. Make a Potion, and drink it warm.

There are several external things which hasten the Birth ; as Sternutatories, Fomentations, or Bags applied to the Navil. Amulets either hung about the Neck or applied to the Knees, Legs or Stomach, such as the Eagles stone, Blood-stone, Loadstone, *styrax calamita*, Tiger's skin and the like. Liniments are often excellent : for instance ;

Take of *Unguentum dialtheæ* six Drachms, Fat of Serpents two Drachms, of Quails, Oyl of Wall-flowers, white Lilies each one Drachm, Amber one Scruple. Mix and give it.

They may be girt with Girdles of a Man's or Stag's skin, which, and

and other things do good, as they help the compression of the *Abdomen*.

When none of these things will do, and the pains encrease, either the Mother, or Child, or both must Die, unless you cut out the Child. But when the Mother is dead it must be done quickly: for the Child in the Womb cannot long survive there. And Section of the Child out of the Mother alive, is easier said than done. But though it be difficult and frightful, it is not impossible, as we have several instances.

§. 10.

NOW we will proceed to empirical Medicines, whereof every good Woman has one.

I have by my own experience seen several effects of a piece of Tiger's skin, tied to the left Thigh.

Some tie the heart of a black Hen to the left Hip.

Johannes Agricola says, that, to force away a Child, the Secundine, or a dead Child, nothing is better than *aurum porabile*,

Petrus Bayrus ties the root of a Gourd above the reins of a Woman in Travail, and, as he says, she will presently be delivered.

Jul. Cæs. Claudinus, to bring pains, gives two Ounces of warm Water, and a little Honey.

Hermannus Corbæus Gynæcii, l. 2. c. 5. gives this as an infallible secret;

Take Nettle root, boyl it in Wine; and in a draught of that Wine give of Powder of Cinnamon

two Drachms, Saffron one Scruple.

Or white Amber and white Hawk's dung each half a Scruple may be given in Wine.

Claudius Deodatus will have a Woman to chew Bay leaves in her Mouth, and to tie them above her Navil.

Let Vervein with root of Poly-pody be tied to her Hips.

Franc. Oswald. Grembs in difficult Travail commends a Drachm of *Lapis Specularis* drunk in white Wine, and the Eyes of a Hare, taken in March.

Phil. Grulingius says, *Med. pr. l. 4. part. 4. c. 4.* In hard Labour there is not a more present remedy than this. Give the Patient a piece of *Boletum Cervinum*, as big as a small Bean, to chew a little, then bid her rub her Navil with the one half, and keep chewing the other.

Helmont magnifies the Liver and Gall of an Eel dried and powdered, and drunk in Wine, about the quantity of a Hazle Nut. And he says, there is the gift of GOD in this simple experiment.

Conrad Kubnrad. medull. destillator. p. 1. has this following experiment for hard Labour;

Take two live Crab's, bruise them and strain out the juice. Add of Fox and Hare's Fat, each equal parts, melt them at the Fire: then put in the foresaid juice. Mix them, and make an Unguent.

He also says, it has been often tried, that if Rosemary be bruised, and steeped four and twenty hours

in Vinegar, and a little of it tied to the Womans Navil, and half a Drachm of prepared Amber taken also inwardly at the same time, in Wine or Mugwort Water, it will hasten the Birth. He also says, it is a certain experiment, if the Woman in Travail take a little of her Husbands Urine.

Simon Paulli says, this is a never failing experiment;

Take of Seed of Lavander half a Drachm, Plantain, Endive each two Scruples, Pepper one Scruple. Mix them. Make a Powder. Let the Patient take it in three Ounces of Woodbind and Endive Water. Or,

Take of Seeds of Lavander half a Drachm, white Amber, Borace, each two Scruples, Oyl of Cinnamon nine drops. Mix them. Make a Powder for three Doses in Rhenish Wine.

Franc. Ranchinus has this following;

Take two Drachms of *sperma ceti*, in Cinnamon Water, or in a Decoction of Motherwort and Mugwort.

Eustachius Rudius says, this following has been tried by long experience;

Take of the rind of *cassia fistula* one Drachm, *asarum*, Cinnamon, Saffron, Savine each half a Drachm. Mix them. Make a Powder. The Dose is one Drachm.

Jo. Andr. Smitzius commends

five or six Grains of Juniper Berries.

Martinus Schmak gives two pieces of white Lily root. He also gives the Water in which two Eggs have been boyled hard.

Joh. Schroderus highly commends the tears or Gum of Harts, about three Grains, in hard Labour.

Sennertus gives a few drops of the liquor distilled of hazle Wood, in some convenient Water. He also commends a dried Secundine, amulets of Snake's Sloughs. He also says, that Coral, Jasper, Knot-grass root, and green Coriander does hasten Travail, tied either to the Hip, or to the Soles of the Feet.

Arm. Weikerdus his Secret is one Drachm of *Pseudo Melanthium* in strong Wine.

Some also say, that a *Glossopetra* held in the Womans hand till it is warm, hastens her Travail.

Columbine Seed powdered and drunk in Wine, is good to hasten Travail.

And so is *diſſamnus Creticus* both inwardly and outwardly.

The Rose of *Fericho* put into a glass of Wine, makes a draught, highly valued by some for hard Labour.

§. II. *The Cure when the Child is Dead.*

WHen the Child is Dead, and so the difficulty in Travail the greater, care must be taken to force it away presently, lest it putrefie and endanger the Mother. And all the things before mentioned,

mentioned; that promote the Birth, and the *Menses* powerfully, do likewise force away a dead Child, such as roots of white dittany, *aristolochia rotunda*, Florentine *Iris*, *asarum*, black Hellebore, leaves of Savine, Dragons, Motherwort, Saffron, Marigolds, Gums, as Myrrh, Aloes, Borace, Ammoniack, *Galbanum*, *Sagapenum*, Pulp of Coloquintida and the like. We in this case do with success use trochiscs of Myrrh, Venice *Borax*, Savine leaves, Saffron, Filings of Steel, &c. For we never, as some Authors have advised, durst yet use Vomits. All Balsamicks, that resist Putrefaction, are good: for instance;

Take of white Dittany, Cinnamon, testicle of a Horse, Borace each half a Drachm, Castor, Myrrh, Amber each half a Scruple. Mix them. Make a Powder and divide it into three equal parts.

D. Morgagnus commends this following;

Take of Wall-Flowers, Venice *borax*, white Amber prepared, shavings of Savine wood, *Gallia moschata*, Saffron each half a Scruple, *confectio Alkermes* half a Drachm, prepared Pearl half a Scruple. Mix them. Take it in Cinnamon Water warm. Or this following may be given at one Dose;

Take of *aqua carbunculi* two Drachms, Water of Cinnamon, white Lilies each half an Ounce, *cordial. H. Saxen. calid.* three Drachms, Venice *borax* half a

Scruple, Salt of Snake's eight Grains, *Balsamus vite* three drops, essence of Saffron two drops. Mix them. Make a Potion.

A *Pessus* may be made of Gum *Sagapenum*.

§. 12.

Vhen Phylick will not do, we must go to Chirurgery. Which is performed by the Hand or Instrument.

§. 13.

These Medicines following are empirical.

Tobias Dorncrellius says, to expel a dead Child at any time, pound some Rue and Scammony together, incorporate them in Coton, and put them into the *Matrix*.

Petrus Forestus gives the juice of green Lovage leaves in Mugwort Water, or Beer, or Wine. He also commends the following Powder;

Take of *assa fetida*, half a Drachm, Seed of Rue, *castia lignea*, Date stones, Borace each one Drachm and an half, Saffron half a Drachm, Myrrh, *theriaca diateffaron* each one Ounce. Mix them. The Dose is one Drachm in Savine Water.

He says also *observat.* 76. that he gave a Woman, who could not be delivered of dead Twins, a Decoction of Mugwort and Savine with Lily Water, and he took

§§ 4

green

green Savine, adding a little Powder of Saffron, wrapt it in a linen Cloth, in form of a Pessary; he ordered it to be dipt in Oyl of Lilies, to be put up into the Womb, and to be kept there a little. After taking of which Medicines the Woman was in a quarter of an hour delivered of a dead Child.

David Herlicius says, nothing is better than a Decoction of Linseed, or it may be injected into the Womb.

Domin. Leo says, a dead Child, may presently be brought away by a Pessary made of Coloquintida, Galbanum, root of Snake-weed and black Hellebore.

Maroldus commends a Plaster of boyled Coleworts, mixt with Fat. He also highly values a Decoction of *his* leaves.

Sennertus commends fifteen or twenty drops of Oyl of Hazlewood, drunk in Wine, and the Testicles of a Horse.

CHAP.

He says also, he cured a Woman, who could not be delivered of a dead Child, by a Decoction of Mugwort and Savine with Lily Water, and he took

two Drachms Water of Cinnamon, with a Spoon full of Oil of Clove, and a Spoon full of

CHAP. VIII.

Of the Symptoms of Lying-in Women.

§. 1.

Several Symptoms attend lying-in Women: we shall examine the chief. In some the Secundines remain behind, in some the Flux of the *lochia* is too little, in others too much; all have after-pains, and a Milk Fever; some want Milk in their Breasts; others have too much and coagulated; hereupon ensue Inflammation, Hardness and an *Erysipelas*. What other Diseases occur, they may be seen in their proper Chapters.

§. 2.

THE After-burthen is called Secundines à *Secundis*, because it is, as it were a Second Birth. It might very well be derived à *Sequendo*; because by right it should immediately follow the Child. It is called *loculus*, *Secundæ*, &c.

Description of the After-burthen.

THE Secundines are the Membranes that inwrap the Child, or the third and outmost Coat of the Child, beset with Veins and Arteries arising from the *Cordyldones*, and fastened to them, and it is fastened likewise to the Navil of the Child by the umbilical Vessels; and in a Natural Birth it always comes away with the Child, together with the *placenta uterina*. But in a preternatural Birth, sometimes after the Child is Born, the Secundines tarry behind in the Womb.

§. 3. *Description of the Lochia.*

IN every Birth the *placenta uterina* is separated by the Midwife, whence proceeds a Flux of Blood after delivery, which Blood being lodged in the cavernous substance of the Womb, and evacuated, is called the *lochia*, or Child-bed Purgations. Some lying-in Women have their *lochia*, for two, three,

three, four days or more, some have them eight, ten days, or more; and sometimes more, sometimes less Blood comes away in the time. Which a good Physician ought well to consider, and whether the Flux be natural or preternatural. For Women that have abundance of *Menses*, have more of the *Lochia*.

§. 4. *Description of after-Pains.*

PAins do not only come upon Women in Travail, but after, which are often so violent, as to produce not only a Fever, but a *delirium* also, and sometimes Death. The good Women therefore are out, who think these Pains are good for those that lie-in; for in their opinion Pains promote the *lochia*, which is altogether false, as *Sylvius* says very well; Therefore because the Cure of these said Pains is neglected and hindered by many, as beneficial, yet the neglect thereof costs many Women their lives in Child-bed.

§. 5. *The Milk Fever, Hardness, Inflammation and Erysipelas.*

THree days or more after they are brought to Bed, Women are taken with a shivering, and a Fever. And so the Milk undergoes divers mutations, and sometimes is coagulated, which causes hardness of Breasts, Inflammation and an *Erysipelas*,

§. 6. *Signs of the Retention of the After-burthen.*

Signs of the Secundines retained are manifest to the Midwife and Women that are by.

Signs of Flooding.

YOU may know a Flooding by the large efflux of Blood, Faintness, Swooning, Paleness, Leanness, and such like grievous Symptoms, which usually attend other immoderate excretions of Blood.

Signs of deficient Lochia.

YOU may know the *Lochia* are suppressed, partly by the Lying-in Woman her self, and partly from the by-standers, by a dull pain of the *Hypogastrium*, loyns, *Abdomen*, swelling of the Belly, difficulty of breathing Fever, and other supervening Symptoms.

Signs of a Milk Fever.

A Milk Fever or Ague is known principally hereby, viz. that the Child-bed Woman three days after her Delivery, is taken with a shaking, and afterwards with Heat, Thirst, swelling of the Breasts, uneasiness of the whole Body, &c. Which is sometimes attended with an Inflammation, and an *erysipelas* of the Breasts and other parts.

§. 7. *Cause*

§. 7. Cause of the Retention of the After-burthen.

IT often happens in Travail, especially a difficult one, that when the Child is come into the World, either because the umbilical Vessels are corrupt, or too small, or because they are entangled about the Neck or other parts of the Child, or because they are pulled too violently by the Midwife, or because the Secundine sticks too fast to the Womb, or for some other Cause, to wit, the Mothers weakness, or the closing of the parts, or the breaking of the Vessels by the ambient Air, or some other way, the Secundine remains in the Womb, and cannot conveniently be voided.

§. 8. Cause of Flooding.

Flooding has several causes, a *Plethora*, thinness or thickness of Blood, its Acrimony, or violence in Motion, the disorder of the animal Spirits, but especially the *Anastomosis* or breach of the Arterious Vessels after delivery.

The external Causes are the Air, when too hot; Aliments and Medicines too sharp, and Menagogues, excessive Watching, unseasonable or excessive motion of the Body; wherefore they that apply themselves to business before their Month is out, are subject to this Disease. Sudden passions of the

Mind, as Anger. Other excretions suppressed, besides other things which may befall them as a blow, fall, &c. Or the violent dilaceration of the Midwife, that causes an excoriation of the Womb, which must needs be painful, especially when any great Vessels of the Womb are broke. *Sylvius* says, the primary Cause of After-pains, is the close connexion of the Secundine with the Womb; and the second is the flowing of the Blood by the rent and excoriated parts of the Womb, which corrodes them, especially when the Blood is sharp.

§. 9. Cause of the Suppression of the Lochia.

A Suppression of the *lochia* is, when after delivery either no Blood at all, or very little, and that Serous or Pituinous, either with or without Pain, is voided by the Womb. It proceeds from some fault in the Blood, or Diseases of the Womb and its Vessels, rarely from the Diseases of the *vagina* and other parts. The Blood is in fault, when there is little in the Body, and when much of it was lost before the Travail, and in it, when it is Grumous and Thick, as it is usual after delivery, at which time even such as have their *lochia*, usually void great clods of Blood, and sometimes also it is so Phlegmatick and Viscid, that it stops the Vessels. The Vessels also may be in fault, when they are obstructed and compressed by a tumor of the Womb or of other parts,

or

orare straitned by the cold ambient Air, or over cool, incrassant and astringent Food, or Medicines Internal or External. External causes also may be in fault, the Air, Meat, Drink, and Medicines too cold, over much Watching, too much Sleep and Rest, sudden and grievous Passions of the Mind, sudden cooling of the Hands and Feet, a Fever, or any other Disease. Pain also may stop the *lochia*. For *Ettmuller* has observed, that it is not the Translation of the matter to the Breasts, that stops the *lochia*, but the pain; for notwithstanding the Breasts are full, when the pain ceases, the *lochia* come again. And he has several times observed, that after-pains have stopt the *lochia*. The Cause of After-pains, when the *lochia* do not come well, or not at all, is when there are sharp humors in them, which exulcerate and fret the parts, by which they must pass.

§. 10. Cause of a Milk Fever.

A Milk Fever may easily arise, either because chyle flows by its ducts in greater quantity than usual into the Mass of Blood, and disturbs it, or through the Retention of the *lochia*, or too violent After-pains. I think that the Cause of these Fevers may also be some insensible and heterogeneous Particles, which traversing the Blood, do put it into an Effervescence.

§. 11. Cause of want of Milk.

THE Breeding of Milk is hindered, either by some fault in the Breasts, or in the Chyle. The Breasts are in fault when the glands are wanting, or when they are inept either to breed or keep Milk. The chyle is in fault, when it cannot come at the breasts. Or when, though it be carried, it is unfit.

§. 12. Cause of too much Milk.

THE Cause of too great store of Milk, is laudable and plentiful chyle, the non-naturals being in good order, especially a good constitution of the Glands of the Breasts, which consists in their softness. For it is observed, that Women who have such Glands, have the most Milk.

§. 13. Cause of curdling of the Milk.

Milk Curdles in the Breast through some acid got into it.

§. 14. Cause

§. 14. Cause of Inflammation of the Breasts.

AN Inflammation has generally a Fever with it, and arises from an over Effervescent Blood: for then the Sulphureous Particles being carried to the circumference of the Breasts, the external parts, and the very Particles of Blood, which are still above the rest, if nothing hinder their appearing, do give a kind of redness in the surface of the Patient: And an Inflammation is nothing but a preternatural Fermentation of the Blood, got out of its Receptacles.

§. 15. Prognostick.

YOU may expect as bad from the retention of the Secundines, as from the retention of a dead Child. And if they are not got out by Nature or Art, the Woman must die.

The suppression of the *lochia* is a dangerous case, not only because particular Diseases are caused by it, but universal ones may be bred in the whole Body, as acute Fevers, Phrensies, *Mania's*, Melancholy, Pleurisies, Peripneumonies, Inflammations of the Womb, &c. If there be a *stupor*, Paleness of Face and Convulsions, there is small hope of recovery. Lying-in Women are cured often of this Disease, by a long Hemorrhage in another place; or by a plentiful Sweat.

But Flooding, as it weakens and often kills Women; so it may occasion several Diseases, which

you may see in other Hemorrhages.

After-pains are easily cured, because sometimes they go away of themselves.

The Milk Fever portends no bad, if care be but taken, that the Effervescence of the Blood once raised degenerate not into a worse; and if the Breasts fill, the Milk be drawn out: Otherwise an Inflammation, Tumor and Abscess of the Breasts may be feared.

§. 16. Dietetick Cure.

IN these Diseases the *Air* must be Serene and Temperate, above all things a cold Air must be avoided. The *Food* must be of good Digestion and Juice; and let Women have a care they take no Acid; for it is very mischievous. The *Motion* of her Body must be moderate, and for nine days she must, if possible, keep her Bed. *Sleep* is good, and *Watching* is naught. The *excreta* and *retenta* must go well. Let the *Mind* be kept cheerful, and free from any Passion.

§. 17. Pharmaceutick Cure of the Secundine.

THE Ancients say, the retained Secundine may be forced away with such things as bring away a dead Child. Among other remedies, they say, it may be extracted by the hand of a skilful Chirurgeon. And if it stick so fast to the Womb, that it cannot other way be got out, but putrefies

fies there, they say, Suppuraters must be put into the Womb, mixt with Detergents. To this end *Rondeletius* commends *Unguentum basilicum*.

§. 18.

Sylbius, who thinks it proceeds from the abuse of gross and glutinous Food, which produces the like Blood, that the After-burthen sticks so fast to the Womb, commends things that correct glutinous Phlegm, namely lixivial Salts, volatil and fixt, Aromatick things, Phlegmagogues, and a correct Diet; Sudorificks, Diureticks, and Emmenagogues.

§. 19.

IN my judgment the intentions of Cure, are to expel the Secundine presently, to mitigate the Symptoms, and to preserve strength. Things that bring away the Secundine, are either Pharmaceutick or Chirurgicall. The Pharmaceutick are such as powerfully expel the *Menses* and a dead Child. If therefore a Woman, after she is delivered, cannot get rid of the Secundine, for want of strength, she must first of all be refreshed with convenient Food, as Caudle made with Wine, Saffron, Sugar and Eggs, gelly broths of Chicken and Partridge. Then she must hold her Breath, and squeeze her Belly. And the Midwife must do her Office. Fumes and bags may be used, made of Uterines.

Here divers Internals are proper which we have mentioned before. But a Drachm of the Powder of

dried Secundine given in broth has a specifick virtue. And so has a Drachm of the skin of a Hen's Gizzard, given in white Wine. Or the Powder following, or some such like may be given;

Take of Amber prepared one Drachm, Borace half a Drachm, Trochiscs of Myrrh one Scruple, Mathier half a Drachm, Saffron half a Scruple. Mix them. Make a Powder. Give a Drachm in Wine and Sugar. Or,

Take of *Venice* Borace, white Amber each one Scruple, Saffron, *cassia lignea*, Castor each half a Scruple. Mix them. Make a Powder. Or this decoction;

Take of root of *Scorzonera*, Peony, Cichory each one Ounce, leaves of *Scordium*, Borrage, Bawm, Mugwort, each half an handful. Boyl them in fair Water. Add to the colature of Syrup of Mugwort, Limons each two Ounces. Mix them.

Joel gives the following Powder;

Take of Castor, Myrrh, liquid *Storax* each one Scruple, Cinnamon, *Aristolochia rotunda* each half a Scruple, trochiscs of Agarick half a Drachm, *Diagrydium* five Grains, Saffron, *Siler montanum*, Savine each four Grains, opium of *Thebes*, *asa fetida* each six Grains. Mix them. Make a fine Powder.

And she may take sneezing Powder.

§. 20.

AMong Externals the noble *Ettmuller* commends this following;

Take of leaves of Motherwort, Penny-royal each one handful, Savine two handfuls, Berries of juniper, Bays each one Ounce, Coloquintida half an Ounce. Shred them grossly, and boyl them in fair Water, the hot steam whereof may be received by a Funnel in a Close-stool Case a while, and may be repeated several times.

But if the liquor cool again too soon, it may be made hot with red hot stones or Iron cast into it. Bags may also be made of these Ingredients, and applied to the Belly.

§. 21.

Here follow several empirical Medicines. *Horatius Augenus*, commends a Drachm of the Testicles of a Horse dried in an Oven.

David Herlicius holds the Secundine of a Sheep or Goat to be a great secret, if it be dried and powdered and given in Wine or made up into an Oyntment for the Neck of the Womb. He also commends the head of a Capon dried and powdered, and given in warm beer.

Job. Primerosius says, it is the secret of some, to swallow the juice of Onyons, and to drink warm Wine after it.

Riverius wonderfully commends the following Decoction;

Take of rose Vinegar eight pounds, Leaves or Berries of Bay three handfuls, a rose Cake left after distillation, cut in pieces. Boyl them in a Kettle, and wash the Hips and Legs a long time with this Decoction hot, from the twist to the Feet.

Job. Andreas Smiezius says, that the juice of Lovage drunk with Wine is an admirable secret to bring away the Secundine, the Menfes, a dead Child, a Mole, and to help Fits.

Job. Schroder, highly commends the Stomach of a Lamprey for bringing away the Secundine.

Daniel Sennertus commends dittany of Crete, Oyl of Hazle, and prepared Secundine.

§. 22.

THE old *Galentists* say, the Cure of After-pains consists in opening the Vessels of the Womb, thinning the Blood, and tempering the Acrimony. *Forestus* commends a Decoction of Chamomil Flowers in Beer, and a Decoction of Mugwort. *Riverius* magnifies the following Powder, if it be given immediately after delivery;

Take of Comfrey root one Drachm, Peach stones, Nutmeg each two Scruples, Amber half a Drachm, Amber-grise half a Grain. Mix them. Make a Powder. Let the Lying-in Woman, take one Drachm of it in white Wine; And if she have a Fever, in Broth. Let her use for her ordinary

nary Drink a Decoction of Parfly Roots Mugwort and Cinamon.

If After-pains proceed from bilious Humors, they are cured as the Colick.

§. 23.

Splivius varies the Cure according to the Causes. If the racking and repeated Pains come from an Acid or a Salt, redounding in the Blood and carried to the Womb, they must be cured by volatil and aromatick Acids. If the Womb is excoriated, it must be healed by Vulneraries. If the *Lochia* be excessive, by Astringents To which end he uses the famous Mixture for Hemorrhages, and mixes Vulneraries and Narcoticks together. He injects also Vulneraries with a Syringe. If the Blood of the *Lochia* be serous, he gives Anodynes in Form of Emulsions, and now and then *Opium*. And if the Woman is not very weak, he gives a gentle Hydragogue to evacuate the *Serum*. Then he gives Sudorificks made of Astringents, Roots of Avers, Tormentil, &c.

When the Blood by stagnation is turned acid, he gives things to temper Acrimony, but so as not to encrease the Flux of Blood. To which purpose he gives gentle Aromaticks and astringent Vulneraries, such as Betony, *Scordium*, Golden-rod, Burnet, Vervain, Tanfy, Milfoil, &c. Whereto divers Uterines may be added, Majoran, Mountain Calamint, Penny-royal, Rosemary, Garden-Rue, Sage, &c.

When the after-pains proceed from the Suppression of the *Lochia* by external Cold, he gives Medicines to provoke the *Lochia*.

But if, when the *Lochia* come, the Pains remain, then Sudorificks will be proper, neither very aromatick, nor very Astringent, lest the Flux of the *Lochia*, be too much augmented, or stoppt. Always add Opiates to things that ease Pains, which promote the Operation of Sudorificks.

If an Inflammation of the Womb arise from the Suppression of the *Lochia*, it must be quickly cured. To this end he commends emollient and carminative Clysters, and Sweats of Crabs Eyes, *Autimonium diaphoreticum*, and Opiates. He is also for emollient and aromatick Fomentations boyled in Water and applied with a Sponge, Linen Cloths or a Bladder. In this Case he bleeds in the Arm or Foot, as he sees occasion. If the Inflammation yield not to these Remedies, he promotes Suppuration by Emollients, adding the Bulbs of white Lilies and Onyons, first roasted and bruised. Where the Heat is great, he boyls them in Butter-milk; and if the Pains are very violent, in Sweet-Milk. Where Wind is the Cause, he gives carminative and emollient Clysters, made of Boys Urine, which dissolves Wind, by reason of the volatil Salt in the Urine. He commends Mixtures of Oyl of Aniseeds, Amber, Mace, Orange Peel, Caraway, Cumin, Fenil, Juniper, &c. not neglecting *Opium*. He hinders the breeding of Wind afresh by Medicines that alter glutinous Phlegm; and when

when Bile offends he gives Cholagogues, and Subacids, especially Spirit of Nitre. If after-pains come from any sharp Humors, they must be corrected and evacuated.

§. 23.

IN our Judgment after-pains must be cured by removing the Causes, mitigating the Symptoms, and by recruiting the plaitick and animal Spirits. If therefore after-pains be caused by a Suppression of the *Lochia*, things must be given to procure them, lest the extravasated Blood stagnate and putrefie; in which case Medicines of Myrrh, *elixir propriæ simpl. &c.* are proper. Blood may be let in the Foot. If the Blood of the *Lochia* be grumous, or sharp and serous, then it must be corrected by convenient Medicines; as with Opiats and Astringents mixt. Here is a Receipt;

Take of Powder of Crabs Eyes, Goat's Blood each one Drachm, *antimonium diaphoreticum* one Scruple, *Laudanum Opiatum*, or *theriaca cælestis*, two Grains. Mix them. Divide it into three equal Parts.

If after-pains come from excessive Exulceration of the Parts, then besides divers Vulneraries, Juice of Chervil and its Decoction are proper. The Pain is abated by Opiats, and by Emollients, as with this or the like Mixture;

Take of Water of Penny-royal, Fenil each two Ounces, Treacle simple six Drachms, Crabs Eyes two Scruples, *Laudanum Opiatum* three Grains, Trochiscs of Myrrh one Scruple, Syrup of Mugwort six Drachms. Mix them. Or;

Take of Essence of Myrrh two Drachms, Castor, *Essentia Anodyna* each one Drachm. Mix them. The Dose is twenty Drops. Or;

Take of Saffron half a Scruple, Mace one Scruple, *Tryphera magna* half an Ounce. Give it at twice in warm Wine.

Divers Aromaticks also are good. I have several times cured after-pains with half a Drachm of Zedoary Powder. Old Cock or young Capon Broth is good the three first Days. Externally Emollients are good. Our Women commend blew Paper spread with Deer's Marrow or Linseed Oyl, and applied to the *Abdomen*. Bags and Fomentations, made of Carminatives, Emollients, Anodynes, and Discutients are good.

This following will not be improper;

Take of Seed of Millet, Cummin, common Salt each an Handful and an half. Fry them in a Pan. Put them in two Bags, and apply them to the Navil.

This also is good.

Take of Bay-berries one Ounce and an half, Root of Marsh-mallow
T t t

mallow one Ounce, *Calamus aromaticus* two Drachms, Boyl them in a sufficient quantity of Spring Water. Add some Fat of Capons and Goose. Mix them. Make a Cataplasin; Or;

Take of Fat of Bever one Drachm, distilled Oyl of Spike half a Scruple, Amber, Cummin, *Angelica* each six Drops. Mix them.

If after Pains come from an Inflammation of the Womb, then use *Sylvius* his Method.

If from Wind, use Carminatives, and lay a Plaster to the Belly. This following is *Crato's*.

Take two or three Onions boyled a little. Bruise them. Add Powder of Cummin, Chamomil Flowers bruised each one handful, Barly Flour what is sufficient. A little Flour of Linseed also may be added.

Some commend the drinking one Ounce of Chamomil Flower Water, and the applying of Pelitory Leaves fried with Oyl of Rue to the Belly frequently.

Sennertus commends *Species diacymini* and *diagalange* for after-Pains.

Forestus uses a Decoction of Chamomil Flowers in Beer.

§. 24. Cure of the stop't Lochia.

THE *Galeni*s bring the *Lochia* again by forcing Medicines and such as open the Vessels of the Womb. To which end they give emollient, laxative and aperient Clysters. They rub the Thighs downwards, make dolorifick Ligatures upon the Toes, apply Cupping-Glasses to the Groins and Hips, and they bleed in the Foot. Inwardly they give aperient Decoctions, with Cinnamon and Cicers. *Riverius* uses this following;

Take of the opening Roots each two Drachms, Leaves of Betony, Endive, Maiden-hair each one Handful, *Schoenanth* one Pugil, Seed of Anise, Fenil each one Scruple, red Cicers a Spoonful. Boyl them to a Pint and an half. Add to the Colature of Cinnamon Water two Drachms, Syrup of the five opening Roots three Ounces. Mix them. Give four Ounces twice a day.

Before the Fever increases, he gives a Drachm of Trochiscs of Myrrh in White-wine or Fenil Water. He says also, that seven or eight days after Delivery a Purge will be good of Infusion of Rhubarb, Agarick or *Senna*, with a loosening Broth made of aperient Herbs and Roots of *Senna*, or an Ounce and an half of *Manna* dissolved in Broth.

§. 25.

Spiritus cures the Stoppage of the *Lochia* from external Cold, by giving Medicines presently which dissolve coagulated Phlegm or Blood in the Womb; such as are all aromack and volatil things, especially Uterines; he also joyns Sudorificks, that they may do the Business the sooner. To this end he commends things that provoke the Menfes. But as soon as a Fever arises, for want of the *Lochia*, he earnestly advises not to be over busie with Aromatics, lest we increase the Fever: But he rather advises the use of Acids with Aromatics, as distilled Vinegar, *Aqua Amstelodamensis alexispharmaca* or *prophylactica*; Salt of Vitriol, &c. especially if Crabs eyes, *Antimonium diaphoreticum* and the like, which dissolve coagulated Blood, be added to these Mixtures. If they have been stopt several days, the Cure will be difficult. In this Case he orders Bleeding, and Clysters. He says that Fomentations and Oynments are good, applied to the Belly.

§. 26.

We have three Indications of Cure. 1. To remove the Causes of the Obstruction. 2. To mitigate the Symptoms. 3. To comfort the Plackett Spirit and the Strength. If it proceed from want of Blood, it may be cured with analeptick Food. If from concrete and grumous Blood, caused by an Acid, *Sperma Ceti*, mixt with

Aborbents will be good;

Take of *Sperma Ceti* one Drachm, Crabs Eyes half a Drachm, white Amber one Scruple, Castor half a Scruple. Mix them. Make a Powder, to be taken at twice in some proper Vehicle.

The following Mixture will be very proper, when there is a Grunescence of Blood from external Cold, and consequently a Suppression of the *Lochia*. *Estimuller* cured several with it;

Take of *Aqua carminativa*, *Hirundinum cum castoreo*, Water of Bawm each one Ounce, *Antimonium Diaphoreticum* half a Drachm, *Sperma Ceti* one Drachm, Syrup of Cinnamon half an Ounce. Mix them. Let the Lying-in Woman take two or three Spoonfuls now and then.

Here volatil Oily Salts are good, and all things that are good against the Suppression of the *Menfes*.

If the Stoppage proceed from Pain, then Opiats with Medicines of Myrrh and other Aborbents are good, especially Crabs Eyes. So in a Disorder of the animal Spirits *Cinnabarines* mixt with Opiats are proper.

If it proceed from viscous Phlegm, obstructing the Vessels, then Aromaticks, things endued with a volatil Salt, and other gentle Aperients are proper: for Instance;

T t t 2

Take

Take of Water of Motherwort, *Carduus benedictus* each one Ounce and an half, Essence of Myrrh three Drachms, Venice Borax one Drachm, volatil Salt of Harts-horn nine Grains, Syrup of Mugwort six Drachms. Mix them.

Let the Patient take of this Mixture two or three Spoonfuls often, and lay her self to sweat. For Sudorificks are very good, inasmuch as they incide a Viscid and correct an Acid.

For inciding a viscid Blood it will be proper to give the following Mixture by Spoonfuls;

Take of Water of Chervil, Motherwort each one Ounce and an half, sharp Wine Vinegar six Drachms, Crabs Eyes prepared one Drachm, diaphoretick Antimony one Scruple, Syrup of Mugwort half an Ounce. Mix them. Or;

Take of Spirit of Secundine three Drachms, *aqua hemagoga* three Ounces, Syrup of Cinnamon six Drachms. Mix and give it by Spoonfuls.

Essence of Myrrh is also good made with tartarizate Spirit of Wine. And so is Tincture of the *Scoria* of Antimony. A Decoction of Chamomil Flowers and Orange Pill in Beer, often cures, at least gives Ease.

If cleansing do not succeed, a Decoction of red Cicers with Cinnamon is an excellent Medicine: for it comforts the plastleck

Spirit and expels retained Impurities.

If from Compression of the *Fæces* or Tumors, the Tumor must be asswaged, and a Clyster given.

If from a Plethory, you may bleed in the *Saphæna*.

Among Externals I would recommend the following applied to the *hypogastrick Region*;

Take of Oyl of Wall-flowers half an Ounce, detilled Oyl of Cummin, Juniper each one Drachm, Amber half a Drachm. Mix and use it.

Take of Leaves of Wormwood, Flowers of Chamomil each three Handfuls, Motherwort two Handfuls, Root of Angelica one Ounce and an half, four greater cold Seeds each two Drachms, Juniper Berries two Ounces. Mix them for a Bag.

Also *Emplastrum de baccis lauri*, applied to the *Hypogastrium* will be good.

And since the obstructed *Lochia* may reitagnate into the Mass of Blood, and infect it with a Virulence (for the Particles that come from a cadaverous thing, may hugely taint the Blood) a dangerous, yea, a malignant Fever may be occasioned thereby. Wherefore you must go warily to work, and cause the *Lochia* to return, and add things that resist Putrefaction, and balsamick Alexipharmacks, concerning which you may look in Fevers.

§. 27.

A Mong empirical Medicines *Mizaidus* reckons Juice of Borrage, Apples and Parsley given to the Child-bed Woman with Wine and Oyl of Sweet Almonds.

§. 28. Cure of Flooding.

THE Cause of Flooding, according to the *Galenists*, consists in the checking of it. But they give great Caution, that by over Astringion we cause not other Diseases; therefore we must begin with gentle ones. The Meat must be in crassating, the Drink, Water, wherein Steel or Gold has been quenched. Afterwards they advise things that make Revolution of the Blood upwards, as Frictions and Ligatures of the upper parts, Cupping-glisses to the Breasts and each *Hypochondrium*. They say also the Body must be swathed because thereby the Vessels are compressed and the Immoderate Flux stopt; they also advise to apply Linen Cloths to the Loyns, dipt in Oxybate. If Flooding endanger Life, they have recourse to more effectual things, as to Opiats, and divers Powders, and other Forms of Medicines, which you may find in other Hæmorrhages. Externally they apply divers Cataplasms and Unguents: as;

Take of *Unguentum comitissæ* two Ounces, Juice of Plantain one Ounce. Mix them.

An Injection of Plantain Juice into the Womb is commended by *Galen*. This following is commended by *Riverius*;

Take of the purest Soot of the Chimney eight Ounces, mix it with strong Vinegar. Make a Cataplasim, and apply it to the Reins.

If these and Opiats will not do they fly to Venesection, as to the last, but a present Remedy.

§. 29.

Paracelsus, *Helmont*, and *Swiss* do in this Case advise divers Astringents and Specifics, before mentioned in other Hæmorrhages.

§. 30.

Sylvius in violent Flooding caused by Unskillfulness or Rashness and Hast of the Midwife in taking away the after-burthen, advises divers gentle astringent Vulneraries, such as *Tormentil*, *Bistort*, all the *Consolida*, *Myrtle*, *St. John's Wort*, *Coral*, *terra sigillata*, all *Boles*, *Dragons Blood*, *Bloodstone*, &c. He relies much upon the following Mixture in this and all other Hæmorrhages;

Take of Water of Plantain one Ounce and an half, *antiepileptic*. *Amstelod.* distilled Vinegar each half an Ounce, Bloodstone half a Scruple, red Coral prepared one Scruple, *Laudanum Opiatum* two Grains, Syrup of Myrtle one Ounce.

T t t 3

Mix

Mix them. Let the Lying-in Woman take a spoonful of this mixture, shaking it first.

Or she may take the following Decoction;

Take of root of Tormentil, Bistort, each two Drachms, leaves of Comfrey, Sanicle, Winter green, tops of St. John's wort each one handful. Boyl them in steel Water. In twenty Ounces of the Colature dissolve of Syrupus de Symphyro Fernelii three Ounces, aqua Antepileptica, or Hysserica Amstelod. six Drachms. Mix them. Let the Patient drink about three Ounces of this Decoction twice or thrice a day, till the Flooding cease.

Opiats may verywell be added to these things. When they will do no good, he is for bleeding in the Arm, to divert the Blood from the Womb. He applies divers external Astringents both to the Belly and Back, as *Unguentum Martiatum*, *Populeum*, *Astringens Fernelii*, *Aureum*, *refrigerans Galeni*, *Emplastrum ad Rupturam*, Oyl of St. John's wort, water Lily, Roses, Mastic, &c.

Flooding, that proceeds from too great Laxity, may be cured by Astringents, and gentle Aromatics.

That which comes from an over thin and Serous Blood, may be cured by Hydragogues and gentle Sudorifics.

If Flooding proceed from Food, Physick or Poyson, or if the Blood be thinned, with drinking Spirit of Wine, it must be tempered with

Medicines that are Austere and Watry, with grateful Emulsions, well made with barley Water and Almonds, adding Anodynes, and sometimes Opiats. For which purpose he commends the following Decoction;

Take of leaves of Mallow, Houseleek, Night-shade each one handful, Seed of Plantain, Sorrel each two Drachms, Columbine three Drachms, white Poppy two Drachms. Boyl them in fair Water. In twenty Ounces of the Colature, dissolve of Syrup of Purslain two Ounces and an half, Spirit of Salt ten drops. The Patient may take three Ounces of this Decoction several times in a day.

He says, the *Lochia* turn black by plenty of a sharp Acid, mix with them, and by lying long in the Womb, which makes them stink; then Aromatics, and things that abound with a volatil Salt, are proper. The Blood is pale by reason of much serum, or Phlegm mixt with it.

§. 31.

THE Cure of Flooding in our judgment, differs little or nothing from the Cure of the excessive *Menses*, which you may see. Here we shall only add a few things.

If Flooding proceed from a Plethora, we let Blood.

If from thinness or sharpness of Blood, we correct it with this, or the like mixture.

Take

Take of Water of young Harts-horn three Ounces, juice of Quinces one Ounce, red Coral prepared one Drachm, Bloodstone prepared half a Drachm, *laudanum opiatum* two Grains, Syrup of Raspberry six Drachms. Mix them. The Patient may take one or two spoonfuls of this mixture once an hour. Or in form of a Powder;

Take of burnt Harts-horn one Drachm, *terra sigillata*, Bloodstone each half a Drachm, *Laudanum Opiatum* one Grain. Mix them. Make a Powder for twice. Or in form of an Electuary;

Take of old conserve of Roses one Ounce, *diacydonis sine spec.* half an Ounce, *trochisci de carabe*, *terra sigillata*, burnt Harts-horn each two Scruples, Syrup of Quinces what is sufficient. Make an Electuary.

If a piece of the After-burthen remain behind, and it cause a Flooding, then this will be proper;

Take of root of Bistort two Ounces, leaves of Majoran, Pennyroyal each one handful, boyl them in Water and white Wine what is sufficient. To twenty Ounces of the Colature, add of Syrup of Mugwort two Ounces, Cinnamon water half an Ounce. Mix them. Let the Patient take three Ounces of this Decoction twice or thrice a day. And give the following Powder;

Take of burnt Harts-horn two Scruples, Bloodstone, Cinnamon, Saffron, *borax* each one Scruple. Mix them; make a Powder for twice.

If Flooding proceed from a too great Dilaceration of the Uterine Vessels, divers gentle Astringent Vulneraries will be proper.

Externally in any Flooding a Cataplasin of Soot and Vinegar is good to apply to the Loyns. Or the following Fomentation may be applied to the *Hypogastrium*;

Take of Flowers of Elder, Chamomil red Roses, red Poppy, Primrose each one Pugil, leaves of Cinque-foil one handful and an half, root of Bistort, Tormential each three Drachms. Shred and bruise them, boyl them in red Wine. Apply it to the *Pudenda*, and repeat it often.

Several other Astringent Liniments and Plasters, mentioned in other places, may be applied. A Linen-cloth dipt in Frog-spawn Water, may be applied to the *Pubes*; and the Loyns may be Anoynted with *Unguentum Santalinum*, *Rosaceum*, *infrigidans Galeni*, &c.

Among empirical Medicines, *Joh. Agricola* for Flooding, commends *oleum vni*, with true tincture of Coral. *Louise Bourgois* gives the Yolk of an Egg in red Wine. *Jo. Hartmannus* takes fresh leaves of black Hellebore, bruises them a little, makes a Girdle, and ties it about the naked Body. *Valleriola* gives one Drachm

of *Philonium Perficum* in juice of Plantain, and he never found a better Medicine: Externally he commends *Unguentum Comitisse*, with juice of Plantain. *Arnoldus Weikardus* cries up the virtues of Trochiscs of Amber, made with opium. *Gotfrid. in lib. obstetric.* Communicates these following: Conserve of Flowers of *Lyfimachia*, or a Drachm of the Flowers in Powder is excellent to stop all Fluxes of Blood. *Pag. 508.* Let Pessaries be made of Cotton, dipt in juice of Horse-tail and Plantain, and strew some Powder of bole Armenick, or Flowers of *Lyfimachia*. Put them into the Womb, and keep them a while there.

§. 32. Cure of a Milk Fever.

THE Cure of a Milk Fever is usually committed to Nature, and as long as the *Lochia* come well, this Milk Fever goes off well without Physick, generally in plentiful Sweat. In these Fevers therefore Diaphoreticks are proper, and often do the business; especially if this proceed from the obstruction of the Milk-Vessels. Therefore if the Breasts be swelled with curdled Milk, the following Aromatick and Spirituous Externals will be proper;

Take of the best Spirit of Wine one Ounce, Sal Ammoniack one Drachm, Water of Elder Flowers three Ounces. Mix them, and apply it with clean Cloths. A Plaster of *Sperma ceti*, and Hemlock will be good. When,

upon Weaning a Child, the Milk should be wasted, this following will be proper;

Take of Parsly, Cummin, and Coriander Seed each half an Ounce. Boyl them in a sufficient quantity of distilled Vinegar and Mint Water. Give it.

The Milk also may be drawn at first, by the Nurse, or a young Whelp, or by a Glas; or it may be milked upon the Coals or hot Iron, which, according to *Helmont*, dries up the Milk. Or she may lay Chervil fried in Butter, or a Plaster of Wax and Bole, to her Breasts.

§. 33.

THE Ancients in these Fevers prescribe Mitigaters, and if the strength will bear it, a gentle Purge of Cassia, Manna, or Tamarinds. If there be a *Plerbora*, they bleed in the Foot. For food they allow of Barly Cream, or Water, in which Cinnamon and Tamarinds have been boyled.

I shall take the rest of the Causes about Milk out of *Sylvius*, who is as good as all.

§. 34. Cure

§. 34. *Cure of Hardness of the Glands in the Breasts, and want of Milk from thence.*

THE Hardness of the Glands, and want of Milk thereupon is cured (especially if it come from an Austere juice and Grief) by using both inwardly and outwardly Medicines, that abound with a volatil Salt, and Spirituous Aromaticks. Among Internals he commends Waters distilled from Aromatick Plants, with Spirit of Wine, which must be mixt with Water of Mint, Fenil, Bawin, adding convenient Syrups volatil Salts, Aromatick Oyls, and sometimes *Laudanum Opiatum*. And these Aromatick waters, mixt with a volatil Salt, may be outwardly applyed with Cloths to the Breasts. So Aromatick Oyntments and Oyls are proper. It is good also to chafe the Breasts gently. Volatil Salts correct an austere Humor.

But when the Vessels, which tend to the Breasts are too small, it scarce ever is cured, or very slowly by frequent and gentle rubbing the place, by which the Blood-Vessels pass to the Breasts, with emollient Oyntments and Oyls, as *Unguentum Althææ*, *Mucaginum*, *Nervinum*, Oyl of white Lillies, sweet Almonds, Mans Fat and other Creatures.

If the Ferment in the Glands of the Breasts be dull, it may be cured with the foresaid Aromatick and Spirituous things, abounding with volatil Salt.

If cold occasion want of Milk, he advises Sweats.

If loss of Blood, he orders it to be stoppt.

§. 35. *Cure of too much Milk.*

WHEN a Lying-in Woman is troubled with too much Milk, and it is occasioned by a laudable, thin and fluid Blood, it must be made viscid, and she must forbear all Food that is Spirituous, and abound with a volatil Salt, and take things that breed a thick and glutinous juice, such as very juicy Vegetables, Plantain, Purslain, Brooklime, Pears, Quinces, Medlars, &c.

If a plentiful and spirituous lactiferous Ferment occasion it, she must take things to dull and fix the Acid, such as all things that are Fat, Glutinous, Bitter, Watry, and lixivious, fixt Salts.

Cure of depraved Milk.

MILK is depraved, when it is faulty in any Quality.

A yellow Milk is produced by a Tincture of Bile abounding in the Blood, and is corrected by purging the Bile at Intervals. Vitriol corrects its excessive Tincture, especially made of *Mars*, and its Anodyne Sulphur.

A very white Milk from a Phlegmatick Blood is cured by correcting the Phlegm with Aromaticks and volatil Salts, and by Phlegmagogues.

A bitter

A bitter Milk produced by Bile is corrected as the yellow.

A salt Milk is cured by carrying off the salt *Serum* from the Blood.

A thick one must be incised by Aromatics and volatil Salts.

A thin Milk must be thickened by a prudent and constant use of austere things, mixt with Food.

§. 36. *Cure of curdled Milk.*

THE Milk coagulated by an Acid, is cured by abstaining for the future from Acids, and from using any volatil Salts. Terror and Grief of mind must be avoided. If an Ague-Fit curdle the Milk, he orders Medicines that abound with a volatil Salt, such as *aqua vita Matthioli*, *iberiacis simplex*; but in this Case he commends distilled Oyl of Cloves above all. Externally Mint, Majoran, and Rue may be applied.

He commends a Plaster of *Sperma Ceti*, applied to the Breasts which dissolves any Coagulation.

When the Milk distends the Breast, causes Pain, and Inflammation, and threatens Suppuration, then he advises to use Aromatics, both spirituous and abounding with a volatil Salt.

But when by the Pricking in the Breast he finds Suppuration is begun, then Emollients must be joyned with Aromatics, and a Cataplasim of them applied to the Breast; among other things he advises two Onyons. Among Emollients he commends Roots of white Lilies, Marsh-mallow, Leaves

of Mallow, Powder of Line and Fenugreek, &c. In this case he condemns Repellents, for fear of a Gangrene. As soon therefore as Milk is turned to *pus*, which is known by the Abatement of the Pain, Hardness and Heat, unless the Apostem break of itself, it must presently be opened with a Lancet. When tender Women will not bear the Opening of that Part, lay a little *Basilicon* or roasted Figs to the Part; or sometimes a Potential Caustery when the *Pus* lies deep. When the Apostem is opened, and *Pus* begins to run, he puts some Balsam of Sulphur in the Orifice and lays either *Diapalma* or some Cataplasim upon it.

Cure of Inflammation of the Nipples and Breasts.

AN Inflammation of the Nipples and of the Parts of the Breast about them, arising from extravasated Blood, may be cured by emollient Cataplasims, and volatil Salts.

Heat of the Nipples and Excoriation may be cured with Water of Roses, Plantain, &c. with Mucilage of Quince Seeds and Gum Tragacanth, made with the foresaid Waters.

In Exulceration of the Nipples he commends any Balsam of Sulphur and Balsam of Peru.

Cure of an Erysipelas.

IN an Erysipelas Chalk and Cream mixt together, and Lime Water boyled with *Mercurius dulcis*, are proper. He also commends Elder-Water.

If the running out of the Milk excoriate the Nipple, he advises a *Lixivium* of Lime.

For the chapping of the Nipples he commends Balsam of *Peru* and Oyl of Wax.

§. 37. Cure of curdling of the Milk by the Author.

W^e would recommend to a Mother or Nurse the taking some Aniseed or Fenil Seed after every Meal. to keep the Milk from curdling. About thirty or forty Drops of Spirit of Sal Ammoniack in Chervil Water is good inwardly.

Externally a Bag of Rice and Millet, applied hot to the Breasts is good, or a Plaster of *Galbanum*, Saffron and Gum Ammoniack dissolved in Vinegar; or the Breasts may be chafed with this or the like Spirit;

Take of Spirit of Sal Ammoniack made with quick Lime one Ounce and an half, Essence of Saffron three Drachms. Mix them. Anoint the Breasts with a Feather.

This following also is excellent;

Take of Mucilage of white Lily and Marsh-mallow and a little Wax and make a *Sparadrap*.

If the Mother intend not to give Suck, that the Milk may not curdle in her Breasts, beside the foresaid things a Cataplasin of the Crumb of Ry-bread well leavened, made up with Powder of Mint, Salt and Rose-Vinegar, will be necessary. And if the Milk be over-thick and coagulated already, Parsly, Chickweed and Chervil will be proper. Or Crane's Bill or Elder Flowers boyled in Butter, or only warmed, may be applied to the Breasts. Or they may be anointed thrice a day with the following Liniment.

Take of Hen's Grease, Ointment of Roses each one Ounce, Oyl of Violets half an Ounce. Mix them.

Or with fresh Butter and Spirit of Sal Ammoniack mixt together. Or a Plaster may be made of red Lead, Wax and Oyl of Roses. And *Sperma Ceti*, with a little Myrrh and Crabs Eyes may be given inwardly.

Cure of Want of Milk.

IN Want of Milk the things following are proper;

Take of Elder Flowers one Handful and an half, Milk one Quart. Boyl them.

A Decoction of Fenil is also good,

good, and of Elder Flowers, Or *Pulvis Diacrystalli Mynsichti*, or this following may be given;

Take of *Lac Lune*, prepared Crystal each one Ounce, destilled Oyl of Aniseed, Fenil each six Drops. Mix them. Make a Powder, and divide it into six Doses.

If upon a sudden Fright or Anger a Woman find any great Alteration in her Milk, let it presently be milked out, and let her take the following Powder in a Draught of Chervil or *Carduus benedictus* Water.

Take of *Antimonium diaphoreticum* one Scruple, *Sperma Ceti* half a Drachm, Crabs Eyes six Grains. Mix them. Make a Powder for one Dose to cause a gentle Sweat.

If the Glands or Lactiferous Ducts be obstructed, all Diaphoreticks, Incisers, aromatick and spirituous things are proper: As;

Take of Water of Penny-royal Bawm, Fenil each one Ounce, Spirit of Sal Ammoniack fifteen Drops, destilled Oyl of Mace, Amber each three Drops, Syrup of Fenil two Drachms. Mix them.

If by an Acid or Austere convulsively contracting the Ducts, the following Powder must be taken often every Day;

Take of Seed of Anise, Fenil each two Drachms, Coriander one

Drachm, Cinnamon, red Coral prepared, native Cinnabar, Earth-Worms each one Scruple, white Sugar the Weight of them all. Mix them. Make a Powder. The Dose is one Drachm.

Aromaticks may be applied to the Breasts outwardly. Sucking is good.

Cure of Sore Nipples.

WHEN a Salt Milk causes Excoriation of the Nipples, things that correct a salt Acrimony and Opiats are good as *Pilule de Cynoglossa*. Externally we use the following Ephemera;

Take of Water of Elder Flowers, Scabious each one Ounce, *Mercurius dulcis*, *Saccharum Saturni* each one Drachm. Mix them. This Mixture may be applied warm to the Breasts.

When Milk corrupts and turns cadaverous, Sudorificks are good. Here is a Receipt;

Take of Water of Elder two Ounces, *aqua theriacalis camphorata* one Drachm, Crabs Eyes half a Drachm, volatil Salt of Harts-horn six Grains, Syrup of *Carduus benedictus* half an Ounce. Mix them.

Cure of an Erysipelas.

IF an *Erysipelas* arise in the Breasts with Heat and Cold, a redness and pricking Pain in the Breasts, Diaphoreticks are proper: for Instance;

Take of Water of *Carduus benedictus*, Elder-flowers each one Ounce, Mandible of a Pike, *Antimonium diaphoreticum* each half a Drachm, Syrup of red Poppy six Drachms. Mix them.

Among Externals the Vulgar commend the inner Rind of Elder with Flower, or Chamomil flowers and Bran applied hot to the Breasts. Treacle and Elder Water would be better; for moist things do no harm as the Vulgar think, if they be but applied hot. They that care not for moist things may apply Elder Flowers sprinkled with Spirit of Wine, or the following Plaster;

Take of Treacle one Ounce and an half, Salt of Wormwood one Drachm and an half. Mix them.

Take *Pulvis Erysipelatis Mynsichti*, sprinkle it well with Spirit of Wine, and apply it.

Cure of an Inflammation.

IN an Inflammation a brown Paper spread with Virgin Honey may be applied, or a Cataplasim of Bean-flower, boyled in Oxycrate.

In an Inflammation with great Pain in the Breasts, the following Cataplasim will be proper;

Take of Root of Marsh-Mallow, Parsly each one Ounce, Leaves of Marsh-Mallow, Hops, Dill, Hyssop each half a Handful, Flowers of Elder, St. John's Wort each two Pugils, Rape Oyl by Expression one Ounce (or beat the dry Seed very fine.) Boyl them in a Sufficient Quantity of Butter-Milk. Make a Cataplasim and apply it to the Breast affected and repeat it often, unless the Patient cannot endure fat things.

In a schirrhous Tumor, *Emplastrum diachylon magnum* and Gum Ammoniack dissolved in Vinegar is proper. *Emplastrum de Rani cum Mercurio* is excellent in this case.

If a Tumor, Pain, and Hardness in the Breasts supervene, and you fear an Inflammation, give the following Powder. I have hitherto found it successful;

Take of Harts-horn prepared without Fire one Scruple, *Antimonium diaphoreticum* half a Scruple, volatil Salt of Vipers

Vipers five Grains. Let the Patient take it in a sufficient Quantity of Elder-flower Water.

If the Nipples are chapt, so as that a sharp Serum ouzes out, this following will be good.

Take of Leaves of Betony, Speedwell, green *Origanum* each what you please, fresh Butter what is sufficient, a little Rhenish Wine. Boyl them to the Consumption of the Juices, then strain them through a Linen Cloth.

In these Chappings the following Liniment will be proper;

Take of Hen's Grease, Turpentine each two Drachms, Gum Tragacanth half a Drachm, Galls three Drachms, a little Wax with a sufficient Quantity of Oyl of Roses make a Liniment.

Abcesss.

AN Abcesss is very difficult to cure. We shall only recommend what *Sylvius* has experienced.

Among empirical Medicines take these following.

Conrad Kinrath medull. destillat. commends the following Plaster for drying up the Milk.

Take of Ry-Bread a sufficient Quantity, Salt half as much, Boylthem in water into the form of a Cataplasim, which must be applied hot to the Breasts, and often repeated.

In abundance of Milk *Hier. Mercurialis* orders the Breasts to be washed in Vinegar. He orders the Application of Broth and Vinegar wherein Cummin is boyled: Or;

Take of Seed of Fleawort, *agnus castus* each two Drachms, Cummin one Drachm and an half, *alumen scissile* two Scruples. Boyl them to a fourth, always stirring them.

Ludovicus Mercatus found this always very beneficial, which is made of an Equal quantity of fresh Butter and Turpentine, washed in Wine and Rose Water. He says also that Oyl, in which Radish thin sliced has been boyled a long time, is of great Moment. *Pulverinus* commends a Plaster made of three Eggs, a Scruple of Saffron, and Wax what is sufficient. *Varignana* accounts it a Secret to anoint the Nipples with juice of Plantain.

In the curdling of the Milk *Aërius* commends this following;

Take of Wax one Ounce, Purflain one Ounce and an half, Oyl of *Sesamum* one Drachm. Mix them.

Rodericus à Castro says, that Garden Parsly bruised and laid to the Breast is good. Others commend *mentha crispa*, bruised and applied to the Breasts, and often renewed. *Dodonaus* highly commends Hare's Runnet applied with a little Vinegar and Butter,

Butter, or some Oyl for dissolving coagulated Milk. *Henr. ab Heers* gives Calves Runnet and Salt dissolved in Vinegar and warm Water. *Jos. Quercetan* commends Rew bruised with Vinegar, and applied to the Breasts. *Riverius*, when all other things fail, commends a Drachm of prepared *Millepedes*, taken in Broth for two days.

In Defect of Milk *Joh. Agricola* commends the Liquor of Flints. *Forestus* commends Milk boyled with excoiated Barly: his Wife tried it. *Phil. Grulingius* commends this;

Take of Seed of Meadow Trefoil, Anise, *Sesamum*, Fenil, Poppy, each half an Ounce. Mix them. Make a Powder. The Dose is a Drachm with Wine, or a Decoction of red Cicers.

Herlicius magnifies *Confectio Seminis Carvi*. *Joel* commends this following;

Take of Seed of Fenil, Anise, Parsnip each half an Ounce, Line one Drachm, Cinnamon two Drachms, Sugar-candy one Ounce and an half. Make a Powder, the Dose is a Drachm and an half Morning and Evening in Wine.

Joh. Stokerus highly commends Linden Tree flowers boyled in Milk. *Thurnhauserus* commends Oyl of Root of Cretan dancus to be drank. *Varigna* found Lettuce, boyled in Barly Water admirable. *Marc. Antonius Zimara* highly values a Drachm of the Hoofs of the Fore-Feet of Kine burnt to Powder, and taken in Broth or Wine.

CHAP.

C H A P. IX.

Of the Green-Sickness.

§. 1.

THIS Disease is called *Chlorosis* from *χλωρε*, a whitish Green. It is also called *Febris alba*, *Morbus Virgineus*, *pallidi Virginum colores*, and *Icterus albus*, from its likeness to a Jaundice. It is a sort of *Leucophlegmatia*. It is generally described to be, *A vitious Habit of the Body, arising from Obstructions of the Veins of the Liver, Spleen and Mesentery, but especially of those about the Womb, with a dulness in the Limbs, Palpitation of the Heart, Shortness of Breath, Appetite to absurd things, &c.* It might better in my Opinion be described thus, *It is an Uterine Disease, produced by the Oppression of the Plastick Spirit, and the Thickness and Acidity of the Blood, obstructing the Capillary Vessels of the Womb, with a Dulness of animal Spirits.*

This Disease is much of the same Nature with a *Leucophlegmatia*, *Cachexy*, and *Longing*, and is almost under the same Cause and Cure.

§. 2. Part affected.

THE Subject by the general Consent of Authors is reckoned to be the Womb, with the rest of the Bowels where Obstructions can be made.

§. 3. Diagnostick.

NOW we must show, how the Enemy may be discovered invading the Plastick Spirit. The Colour of the Face and whole Body is Pale and Whitish, and sometimes Leadens, Livid and Green. It is usually attended with a Swelling and Inflation of the *Hypochondria*, a spontaneous Lassitude of the whole Body, the Legs swell especially about the Ankles, the Body looks soft and flabby, they cannot go up a Pair of Stairs, or stir, but they are out of Breath; they have usually a Palpitation of the Heart, with a Pulsation of the Temporal Arteries, the Pulse is sometimes so quick, that they seem to be in a Fever, and therefore it is called *Febris alba*, they have a dull and lasting Head ach, they are very sleepy

sleepy and dull about every thing, and by Reason of a depraved Acid in the Stomach, they sometimes loath their Victuals and long for absurd things, and then generally their *Menses* are stopt. They are not very thirsty, they are troubled with Belching, the Belly swells after Meal, they have a Rumbling in their Guts, are Squeamish and generally Costive. All their Excretions are crude and phlegmatick. They are ordinarily cold, unless when they have a Flushing, which they often have. By these Signs you need not doubt of the Disease.

§. 4. Cause.

THE old *Galenists* do here blame Obstructions of all the Veins, especially of those about the Womb, which are caused by gross, viscid and crude Humors, bred usually of a bad Diet. You may see several Authors in the Chapter of *Leucophlegmatia* and Cachexy.

§. 5.

IN OUR Opinion the Green-sickness arises from Phlegm a little too acid, and oftentimes from a vitious and corrupt Liquor proceeding from the vaginal Glands of the Womb, disturbing the *Crasis* of the Mass of Blood, and oppressing the plastick Spirit. Hereupon the whole Mass of Blood is slow in Fermentation, and sometimes turns sharp, as may appear by the Symptoms which make them look as Pale as Death.

Swelling and Inflation of

the *Hypochondria* in this Disease do frequently arise from Wind raised by a vitious Gas, which distends the Cavities of the *Abdomen*, and by forcing the Diaphragm upwards cause, shortness of Breath, which is increased by Exercise, because then the Humours grow hotter, and dilate and rarefie, and so make all worse.

A spontaneous Lassitude of the whole Body arises from the *Torpor* of the Plastick Spirit, and from the Paucity and Viscidity of the animal Spirits, which stick in the Mire of the Womb, and cannot extricate themselves, and therefore are insufficient for much Exercise. Lassitude may also arise from the Obstruction of several Nerves in the Muscles all the Body over, so that few animal Spirits can get into them, and so the Limbs are unable to stir. If there be vellication, as sometime there is, there must be some Acrimony in the gross Blood which occasions it.

Pain of the Stomach and depraved Appetite proceed from a viscid Acid, and from the Weight and unusual roughness of absurd Aliments.

Maids are often tormented with Rumbling in their Guts, because they lace themselves too strait, and so by a violent Compression shut the Pores of the Body, and pen up the Wind.

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§. 6.

§. 6.

EXternal Causes are, taking cold in their whole Body, but especially in their Hands or Feet, Intemperance in Meat, Eating absurd things, Chalk, Rice, raw Turf, Crabs Eyes, dry Cruits of Bread, Nutmeg, Vinegar, Juice of Limons, Limons, Oranges and Summer Fruits, all which enervate the Ferment of the Stomach and other Parts. Excess in Sleep and Rest, Grief, Stoppage of Excretions, Costiveness, and Suppression of the *Menses* cause it: and sometimes it is Hereditary.

§. 7. Prognostick.

IT is no dangerous Disease, when it has not been of any long Continuance: for when it is grown inveterate, it may prove the Cause of several Diseases, as Dropsies, Barrenness, &c. The Aphorism of Hippocrates Sect. 5. 36. may have reference to this place; *When a Woman's Menses are discolored, and come not in the same Measure, nor at a certain time, it indicates that Purging is necessary.* There is great Hope of Recovery, when the *Menses* keep their constant times, and are right in Quantity and Quality. If it proceed from the Obstruction of the Veins of the Womb, then in young Maids it is cured by Marriage.

§. 8. Cure.

THE Galenists endeavour to open Obstructions by cutting and carrying off the Phlegm and by strengthening the Bowels. The things that open Obstructions you have before in Obstructions of other Parts. First they give a Clyster, and a gentle Purge. Then they let Blood, if the Disease be young and the Maid sanguine. Then they give opening and purging Apozems, and when they have done Purging they use Bathing as the last Remedy. And lastly they strengthen the decayed Inwards.

§. 9.

IF you would have *Dur* Cure, this is it. You must endeavour to excite the animal Spirits, to correct the acid viscid Humors, to carry them off, when corrected, and to take care of the Stomach. And to go orderly to work, you must begin with cleansing the first Ways; if there be an acid Load in the Stomach, you may safely give a gentle Vomit; or if the Patient be against Vomits, purging Pills, especially made with Gums, adding Saffron, Vitriol, fixt Salts, *Mercurius dulcis*, &c. I have given the following Physick with Success;

Take of Leaves of Bawm, Rosemary, Penny-royal, Nep each half an Handful, Root of Elecampane, *aristolochia varinda*, Angelica, Bryony each two Drachms,

Drachms, Leaves of *Senna* one Ounce, Root of black Heleboe prepared two drachms, white Agarick half an Ounce, Orange Peel, Seed of Cardamom, *Daucus* of Crete each one Drachm, Filings of Steel tied in a Cloth one Ounce, true *Cassia Lignea* two Drachms. Bruise and break them, and put them into a Bag, for a Measure of white Rhenish Wine. The Dose is three Ounces, when there is occasion, in a day.

All things are good here, which we mentioned in the Defect of the *Menses*, especially Martial Medicines. I have cured the Green-Sickness with this Steel Wine alone;

Take of Essence, or Extract of *Mars* one Ounce, *Cassia Lignea* two Drachms, choice Cinnamon one Drachm and an half, Cloves one Drachm, Rhenish or Sack one Quart. Let them stand in Digestion in a warm Place for two days; then strain it through *Hippocrates* his Sleeve. The Dose one Ounce.

Crato commends the following Electuary;

Take of Filings of Steel prepared with Vinegar six Ounces, Cinnamon, candied Nutmeg each three Drachms, Rhubarb two Drachms, *Species aromaticæ rosatæ* two Drachms, Honey and Sugar each one Pound and an Ounce. Mix them. Make an Electuary.

Riverius cured several Maids and Women of the Green-Sickness by the use of *Pulvis cachecticus*. And *Sennertus* holds that Steel is one of the best Medicines.

§. 10.

IN this Disease you must for some time continue giving inciding, attenuating and opening things, volatil and fixt Salts, aromattick Oyls, and mineral Powders will be proper, adding Stomachicks and Uterines. The following or some such Mixture may be given by Spoonfuls;

Take of Water of Mint, Orange Peel or Rosemary, or Majoran each two Ounces, *Aqua Vitæ Matthioli*, or *Spiritus carminativus Sylvii* one Ounce, *Antimonium diaphoreticum* half a Drachm, Spirit of Sal Ammoniack twenty Grains, some aromattick or carminative Oyl six Drops, Syrup of Mint one Ounce. Mix them.

For taking away the ill Colour, *Peter Johannes Faber* commends Quintessence of Nep.

All bitter things are good, such as Tincture of Wormwood, lesser Centaury, Scurvy-grass-Water, Agrimony and *Elixir proprietatis*. Here all things are proper also, which imbibe and sweeten a viscous Acid, and strengthen the Plactick Spirit. The following Powder will be useful for that Purpose;

Take of *acidum tartari Myrschiti*, Crabs Eyes, *Crocus Martis* each one Scruple, Oyl of Uuu 2 Cloves

Clôves four Drops. Mix them for three Doses. Give one every Morning and Evening.

When the Humors are corrected and evacuated, the Reliques must be thrown off by Sweat, by Internals; and if they will not do, by Stoves, Baths, Frictions, &c.

The Inwards, and the Stomach especially, must be strengthened both by Internals and Externals. If it proceed from too small Veins, and the Patient Venereal, advise Marriage.

Lud. Mercatus, when the Spleen being obstructed causes

the Green Sickness, commends an Oyntment of *Elstridge's Fat*. He also recommends to melancholick Women Bezoar and *Scorzonera Root*, infused all Night and drunk in the Morning.

Job. Varandæus commends the following Pills;

Take of Juice of *Mercury*, clarified Honey each one Ounce, boyl them to a sufficient Consistency. Add of Roman *Nigella* powdered three Drachms. Make a Mass; and make one Drachm into six Pills. Let her take two going to Bed, for three days.

C H A P.

C H A P. X.

Of a Furor Uterinus, and Women's Melancholy.

§. 1.

AMong other strange Symptoms, which afflict the Female Sex, a *Furor Uterinus* is one, which may very well be called *Nymphomania*, *Priapismus Fæminarum*, *Melancholia Mulierum*, *Uteri Deliramentum*, &c.

Description.

THIS Disease is commonly thus described, viz. *An immoderate Desire of Venery, making Women almost mad, proceeding from abundance, Acrimony, and a peculiar Quality of Seed, or, in my Opinion rather, A Delirium, with fierceness and boldness, but especially with a preternatural desire of Venery, arising from a Turgesçency of animal Spirits in the Parts allotted to Veneveal Actions, and enraging the plastick Spirit.*

§. 2. *Part affected.*

IN these Diseases the Brain and animal Spirits are affected by Consent with the genital Parts and the Womb. For the Reason why they are delirious, is because the genital Parts about the Womb are continually irritated. So that while they think and talk of nothing but Venery, they go quite besides themselves. Young Widows and Maids of a hot and melancholick Complexion are chiefly subject to this Disease.

§. 3. *Diagnostick.*

ALthough this Disease, when inveterate, need no Signs, as being easie to be known by Dotage, and Discourse, which tell it; yet one beginning is very Latent in modest Women, and cannot be known but by a Prudent Conjecture. However you may know it by Sadness, Silence, Tears, a small, weak and slow Pulse, and now and then quick, that is, if there happen to be any Discourse of Love, or a handsome young Man. So you may guess

at it by down-looking, swollen, rolling, and sparkling Eyes, a sudden alteration from sadness, at the mentioning of Venereal Matters, by bursting into Laughter upon it, blushing and then turning Pale. When the Disease grows worse, they can scarce forbear immodest Speeches and Actions. They talk disorderly of those they Love, they Frisk and Dance, and show by their Gestures, what it is that troubles them. They embrace Men, kiss them, behave themselves impudently, and like Melancholists, fancy strange things to themselves.

§. 4. Cause.

THE Galenists say, that in this Disease, the Seed putrefies and acquires a Malignant quality, which occasions these Symptoms. Some of them blame the Acrimony and Turgescence of Seed, which provoke excessively to *Venus*. They give several external Causes, which are Provocatives.

§. 5.

WE think, that the Plat tick Spirits about the genital parts, make such an impression upon the Brain, and do so open its pores, that there appear no other Ideas but those of Lust. Now the Causes, which irritate the Plat tick Spirit, are Youth, bilious Constitution, the abundance and Acrimony, especially of the genital Humor in the Cervical Glands, whether Salt or Acid, and Plenty of Spirits by reason, whereon they are incited to

Venus. The external Causes, a hot and dry Air; hot, salt, sharp, acid, and aromatick things, Diureticks and Menagogues. Long Watching, and an idle Life may contribute for;

Otia si tollas, periere cupidinis lit arcus.

Remembrance of Venereal matters, Toying, Dancing, feigned Courtship, and the like.

§. 6. Prognostick.

THIS is a miserable Infirmary, both because it can be but slowly cured, and it is a blot to honest Families: for they cannot well resist the titillation (yet sometimes the violence of the Disease is such, that before People they will invite Men to lye with them, and call Venereal matters by their broad Names.) And finally this Disease sometimes degenerates into a *mania cephalica*.

§. 7. Cure.

THE Galenists endeavour to take off the hot intemperature of the inwards, especially of the Womb, and also of the Blood and Seed. To this end, they Bleed, and give things gently to Purge Bile and Melancholy, they superadd juleps to prepare the Humors, and open moderately; afterwards they advise strong Purgers, which you may see in Madness. Then they give things to cool the Womb, and the whole Body. They commend Baths made of cooling things, such as Purslain, Lettuce, Water-Lily, Willow,

Willow, Roses, Violets, &c. They advise the drinking of Whey. To all these they add things that have a specifick virtue to extinguish and cool the Seed. All Refrigerants are good for it.

R. VETUS commends the following distilled Water;

Take of leaves of Water-Lily, Willow, *agnus castus* each two handfuls, Lettuce, Purslain, *Venus-Navil* each one handful, the four cold Seeds; Lettuce, white Poppy each half an Ounce. Bruise all fresh, and sprinkle juice of Limons on them. Dettill them in *Balneo Mariæ*, and to every pound of Water, add one Drachm of Camphire.

Emulsions are usually made of these four Seeds, which are of more efficacy. They prescribe Opiates. They neglect not Clysters, and Injections into the Womb.

Externally they apply cooling Liniments to the Loins, *Pubes*, and *Perineum*, and they order a Plate of Lead to be worn continually upon the Loins. They make an injection into the Womb of Whey, or Barly water, with a little juice of Night-shade, Housleek or Hemlock.

Finally, they think all that is good in a *mania*, is good in this case: for they say, the Brain must be taken care of.

§. 8.

IN *Dur* Opinion, the Cure must be begun with the Regiment of the Non-natural things. The *Air* must either be, or be made,

Cool and Moist. The Food for a time must be Watry and Insipid, the Drink must be small. Sleep must be procured, and Rest must be ordered; but so as not to exceed bounds: *Excretions* must be promoted. And the *Mind*, as far as possible, must be diverted from Venereal matters, and wanton discourse. On the contrary, they must be perswaded by reason, to keep within bounds of Modesty.

When the Diet is thus ordered, if Blood abound, Bleed, Correct and Purge the sharp juices. For correcting the sharp Humors, Watry, Oyly, Earthy and Narcotick Medicines are good; as Emulsions, Juleps, Electuaries, Conserves, &c. for instance;

Take of Seed of Hemp one Ounce, Lettuce, Purslain each one Drachm, four greater cold Seeds each one Scruple. With a sufficient quantity of *Nymphaea* Water, make an Emulsion, and sweeten it with Sugar of Roses. Or,

Take of Water of Lettuce, Flowers of water-Lily, Borrage or Bugloss each six Ounces, *Sal prunella* two Scruples. Mix them. Make a Julep. Or,

Take of Flowers of Water-Lily, Roses each one handful, leaves of Lettuce, Purslain each two handfuls, Seeds of *agnus castus*, Plantain each three Drachms. Boyl them in Water. To twenty Drachms of the Colature, add of Cinnamon Water six Drachms, Spirit of Nitre eighteen drops, Syrup of Water-Lily two Oun-

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ccs.

ces. Mix them. Make an Apozem. Let the Patient drink three Ounces, twice or thrice a day.

Essentia castitatis, *Saccharum Saturni*, and Camphore are good Medicines; for example;

Take of *agua castitatis* five Ounces, *Saccharum Saturni*, Crystal each one Scruple, *Syrupus Nymphaeae* one Ounce. Mix them. Take a spoonful often in a day.

Here also, to correct the vitious genital Liquor in the Glands of the Womb, and to strengthen the Glands, all catarrhal Balsamicks are good, such as Myrrh, Maltich, Frankincense, Camphore, Amber, &c. To evacuate the Humors, which are generally Serous, Hydragogues are good, such as Jalap, &c. and sometimes Chologogues: for instance;

Take of Water of *Nymphaea* half an Ounce, *pulvis Catholicus purgans* one Scruple, Syrup of Water-Lily three Drachms. Mix and give it. Or,

Take of *Pilula de fumaria* one Scruple, Resin of Jalap four Grains, *Saccharum Saturni* four Grains. Mix them. Make Pills.

It is good, in this case, to put Coolers, such as Nitre, and *Sal Prunellae*, in Purges.

In the mean time, at Night Anodynes and Narcoticks may be prescribed of Treacle, Mithridate, *Diafcoridium*, *Pilulae de Styrace*, *Laudanum Opiatum*, &c.

The Womb must be cooled by cooling and astringent Injections, made of leaves of Mallow, Marsh-Mallow, Water Lily, Savine, Lettuce, Purslain, Houseleek, Vine, &c.

Baths of cold Water are good. And the Womb may be washed often in cold Water, wherein *Sal Prunellae*, and *Saccharum Saturni* have been dissolved.

The Loins may be Anointed with Oyntment and Oyl of Roses, adding cooling juices and a little Camphire;

Take of *oleum Nymphaeae* one Ounce, Oyl of Rew three Drachms, *Saccharum Saturni* one Scruple. Mix them. With this Liniment, Anoint the Loins and Genitals.

A Pessary of *Emplastrum de cicuta* is good.

If none of these things will do, the Patient, if she may, must Marry a lusty Man. For it is but turning the Tables, and what advice the Poet gives Men, may be taken by Women. viz.

*Ureris? Oxorem ducas, non expedit uri,
Conjugis in gremio mortificanda caro est.*

B O O K VI.

Of Children's Diseases.

C H A P. I.

*What must be done in the Month, and afterwards
of their Diet and Education.*

§. I.

Certainly, if any one, our divine Hippocrates is Sollicitous for the Health of Children, in divers of his Aphorisms saying; Such things as these befall Children new Born, Thrushes, Vomiting, Coughs, Watching, Fear, Inflammation of the Navil, running of the Ears. When they are Elder, and begin to breed Teeth, Itching of the Gums, Fevers, Convulsions, Loosnesses, do trouble them most that breed their Eye-teeth, and such Children especially as are Gross, and Costive. When they are grown up a little; Luxations of the Tonsillæ and

Vertebræ inward, Asthma, Stone, Worms, Warts, Strumæ, and other Swellings, but especially the foresaid. When they are bigger, and near Pubescence. Many of these things, and tedious Fevers, and and bleeding at the Nose, and many Diseases are judged in Children, some in forty Days, some in seven Weeks, others in seven Years, some when they come to Pubescence, but such as remain, and terminate not at Pubescence in Boys, and when the Menstrua come in Girls, last all ones Life. And many Diseases more may be added, as you shall hereafter see.

§. 2. We

§. 2.

W^e will first consider, how a Child may be hurt in Nutrition by Milk. When the Midwife has done her Office to the Child, it is laid to the Breast, from whence it sucks Milk, for the first two Months, every two Hours; after three or four Months, every six hours; after six Months, twice or thrice a Day. When a Child has been thus suckled for a year or more, towards the latter end you must use it to Drink, till it is quite Weaned from Milk, though many Women suckle their Children two years; and some few, three. And while they do suckle them, they give them Pap of Wheat-flower, and Milk. This is the usual way of Nursing, in which several Diseases arise, so that we may truly say with wise *Solon*; *Man is Putrefaction in his Birth, A Bubble all his Life, Meat for Worms at his Death.* We will premise something concerning the Excrements, that are gathered by Children in their Formation and Nutrition in the Womb, by some called *Meconium*, which lie in their Guts, and unless this blackish green Excrement be timely voided, it often proves fatal to Children.

§. 3. Cause.

V^e Question not, but this Excrement has its Original from the Child's Nourishment, which the last days, it takes by the Mouth, and when it is kept longer than it should, it turns acid. Hence it is the Cause of the Gripes, Fits, and sometimes of the Jaundice. Therefore *Etmuller* says, *Meconium* is nothing but a crude Cheese, sequestrated, and as it were precipitated, from the rest of the nutritive substance. For since it arises from a kind of Milky Nutriment of the Child in the Womb, which more or less retains the Acidity, which it has once contracted from the Stomach, when it meets with Bile in the Guts, they together turn into a dark greenish black Colour, and by tarrying long in the Guts, it bakes harder. Wherefore Physicians, Nature's Servants (since Nature in her ordinary Method does quickly, sometimes at the very Birth, evacuate these Excrements by Stool or Vomit) do very well, before the Child sucks or eats, in giving it Oyl of sweet Almonds, mixt with Manna, or with some Laxatives, either Syrup of Cichory with Rhubarb, or Syrup of Buckthorn made with Honey, adding Crab's Eyes, which *Etmuller* highly commends, for evacuating the *Meconium*, that would turn sowre and curdle the Milk in the Childs Belly. Our good Women do give (and they do very well in it,) *pulvis Mar-chionis* or *pulvis cephalicus D. Michaelis*;

Michaelis: for they are of an imbibing and precipitating Faculty. And because oftentimes Medicines cannot be had, therefore provident Divine Nature, hath furnished the Mother with a serous Milk (the *colostrum* or Beeftings) certainly a Medicamentous Aliment, which for the first days being sucked by the Child, because of its Serous Saltiness, Purges. Therefore Mothers take no good course with their Children, who put them to others to nurse, especially to such as have a thick and an old Milk. If therefore they are not purged by the Milk, give them the forefaid Purging and imbibing Medicines.

§. 4.

THE Mothers Milk is the most natural Food for Children. Wine and things sweetned with Sugar, because they contain an Acid in them, are not proper for a Child's ordinary Drink. A good Milk is white, Sweet in Taste, pleasant in smell, and of a moderate Consistency. On the contrary it is bad, when it curdles and turns Sowre. If it is Yellow and Bitter, it argues Bile; a Blackish or Blew denotes an Acid. So a Sharp or Salt Milk is bad, arising from the like Serum. But there are several insensible faults also, that spoyl the Milk. For it has been observed, that not only the morbid natural qualities are communicated by the Nurses to the Children, but even the Moral, as *Estmüller* and my self have seen. Nay, brutal properties and manners get with the Milk into the Child, as it has been observed in Children brought

up with Hind's or Goat's Milk. See *Reyes camp. elyf.* 9. 47. A bad Milk may easily offend the tender Fibres of a Child's Stomach, may cause Gripes, a Loosness and several other Ails. A Serous Milk, Causes, Loosness, and Scabbiness, a Caseous Milk, Costiveness, want of Appetite and Vomiting; a Yellow and Sharp Milk, Vomiting and Loosness, and Pailties.

§. 5. Cure.

HOW Want of Milk may be supplied, and its ill qualities Corrected, we have observed before in Diseases of the Breast. It is sufficient to suckle a Child two years at the most; and neither Mother nor Nurse, when they have Conceived, must give Suck, but the Child must be weaned, and used to solid Food. If the Mother cannot give her Child Suck, she must get a Nurse; but if she be able, it is best for the Mother to give her own Child Suck. A Nurse must be of a good Habit of Body, a middle Age, well coloured, Honest, neither a Glutton, nor Drunkard, one that has born two Children at least, and brought them up. She must not be diseased, because the Nurse's Diseases are communicated to the Child. She must observe a good Diet. Let her take especial care of Purgers and Acids, which may vellicate Children's tender Fibres in their Stomachs, cause Gripes and Convulsions. Wine and Spirituous Drinks are naught for Nurses. She must avoid an Intemperate Air, immoderate Watching, and too much Rest and Sleep. Her

Meat

Meat must be of good Juice, and easie Concoction; if the Nurse is a Country-Woman, her Meat must not be Dainty, for it is worse for her Stomach than her accustomed Food. She must forbear Cheefe, because it is apt to curdle the Milk in her Breasts, also Salt and Aromatick things, Pulse, Salt Fish, but especially Vinegar and Acids, which is often the occasion of Fits, as *Sylvius* has observed, and Beer not well boyled or wrought, because it spoyleth the Ferment of the Stomach, and Causes Looseness, and Gripes. Let her avoid all violent *Passions of the Mind*, for by disturbing the animal Spirits, the Nervous kind, and through their means the Mass of Blood, and the rest of the Humors in the Body, they alter, and by the same means corrupt the Milk: But especially let her avoid Fright and Anger; therefore her Domesticks must give her no occasion. *Etmuller* gives a notable instance of a Fright. He says, "A Child-bed Woman was heartily frightened; but presently as soon as she was come to herself, she made a Whelp draw her Breasts, lest the altered Milk might hurt the Child, presently the Whelp fell into Fits, but by giving it Treacle, after a long Sleep the Fits went off. I have seen three Examples. Anger is as bad. For both of them disturb Digestion. Nurses do ill in giving the Child Suck too often, for so they kill it with kindness. As to the *excreta* and *retenta* they must all be in order. Neither Nurses nor Women with Child must give Suck: for as often as a Nurse has her *Menses*, an alteration may be found in the Child. But a strange

alteration is made in the Milk, when the Nurse is with Child: for then a corrupted Milk is bred, which makes a horrid impression on the Child. It turns to Cheefe in the Childs Stomach, which may make the Child rue it all its days. *Etmuller*, *Schoockius*, and *Digby* give this as a Cause of several Men's hating Cheefe. Therefore let such as give Suck keep from their Husbands.

§. 6.

NOW also we must say something of Children's Food. And the good Women should be admonished, who in the first Months, make Pap of Meal, Milk and Sugar, and feed their Children with it, which Pap, as *Etmuller* says, is fitter for a Book-binder to past his Books withal, than to eat. For it loads the Stomach, this spoyleth the first Concoction, and consequently the second and third. *Hildanus cent. 6. obs. 6.* observes a most dangerous obstruction of the *Pylorus* by such glewy Pap. Wherefore it is best the first four Months, for the Children to be content with the Mother's Milk only: Afterwards they may eat Broth. Nurses also do very ill by Children, in chewing their Victuals in their own Mouths, to soften it with the Spittle. Hereby several Diseases may be communicated to poor Children.

All Childrens Diseases proceed from an Acid, and a Viscid. The *Galenicists* blame a Gross and Acid Phlegm. The *Paracelsists* an Acid Salt or Tartar. *But* call it a *viscous Acid*. All Medicines therefore that correct this, are good in Children's

Children's Diseases, as all Alkalies, both Volatil and fixt, all Aromatics, Saline Volatils, especially oleous Volatils, *Spiritus salis Ammoniaci Aromatizatus*, *Anisatus* or *Cariophyllatus*, *liquor cornu cervi succinatus*, which are good both for the Nurse and the Child, in a convenient Vehicle. Three or four drops may be given in Water of Mint, Fenil, or in the Mother's Milk. An Acid is also strangely destroyed by Sharp, Aromatick,

volatil Salts, such as Aniseed, Castor, &c. Myrrh, Amber, and Native Cinnabar, umbibeacid. Among fixt and earthy things there are Crab's Eyes, Coral, Pearl, Bezoar, Ivory, Fossil Unicorn, *pulvis Polychrestus Ettmulleri*, who is as good as all in his *tr. de infant. valetud.* where all Children's Diseases are ingeniously and truly derived from an Acid. These are Generals, we will descend to particulars.

CHAP.

C H A P. II.

Of the Jaundice.

§. 1.

Children not only after they are born, but when they are in the Womb are infected with the Jaundice. Yet it usually comes after the Child is born; it will continue a while, and then strike in again. It shows it self by the Skin's being as Yellow as Saffron, when not only the whole superficies of the Body, with the Whites of the Eyes; but the Fat, and fleshy parts, the Membranes, and *Parenchymata* are tinged. This Disease may sometimes be known by the Yellowness of the Urine, which turns Clothes Yellow, and by the Stools being White.

§. 2.

Sylvius thinks, in Children the Jaundice may often come, without the obstruction of the biliary Duct, that is, from the Spirituality, and therefore ineptitude of the Bile to ferment.

we deduce the Cause of this Disease from Bile, or too many Sulphureous Particles in the Mass of Blood. Wherefore Children born of Mothers who give themselves to drink Spirituous and

Volatil things, to wit, Brandy, Sack, and such things, as soon as they are born, have the Jaundice. Without doubt therefore a volatil and sharp Bile, may cause the Jaundice, and I question not but it may proceed from an obstruction of the biliary Duct, by the *Meconium*, or some viscid Humor.

§. 3. Cure.

IT may easily be cured, by using Lixivious, oily Salts Internally and Externally. If the Belly be bound, it may be loosened with Syrup of Buckthorn, adding some Powder of Ivory; Or Syrup of Cichory with Rhubarb, or Rhubarb, and other convenient things may be put in the Nurses Drink. Afterwards things may be given to incide, and open the Choledochal Duct. Every day some drops of tincture of Saffron, or a Grain of Saffron in Substance may be given. For all things of Saffron are good. So are Sudorifics: *Sylvius* commends a Grain of *Bezoarticum minerale*. Externally divers things, mentioned in the Jaundice, will be proper.

§. 4. Chil-

§. 4.

Children about four days after they are Born, have a Purple Efflorescence all over their Skin, with Itching, and a little Excoriation.

§. 5.

THE Cause is, because the Childs Blood in the Mothers Womb, is often tainted with the Mother's Scorbutick Blood, which upon the approach of the external Air, received by respiration, ferments too high. And by this internal Motion the immiscible Salts are thrown off to the circumference, especially to the Intercutaneous Miliary Glands, where they shew themselves by Itching.

§. 6.

THE Cure of this Disease consists chiefly in procuring Transpiration. Therefore the good Women wash the Body in warm Wine, and by gentle rubbing, open the Pores of the Skin, at which these Heterogeneous Salts, and morbid Seeds, may be discharged; and so likewise the Viscosity, acquired in the Womb, and obstructing the Pores, may be washed off. To this purpose, some use a little Soap, that they may wash the cleaner. So much for prevention. If the Disease be troublesome, several Sudorifick Alkalies must be given. In this Case also a Grain of volatil Salt, inwardly will be proper; and so will a Grain of *Antimonium Diaphoreticum*.

CHAP.

C H A P. III.

Of Children's Gripes.

§. 1.

GRIPES are very familiar to new born Children, which not only proceed from the Curdling of the Nurſes Milk, but from either Wind or Humors peccant in an acid Acrimony. It is a ſign of Wind, when the Belly is very much ſwelled, and when they are relieved by breaking Wind. The Signs of an Acid are, beſides their Crying, Stools either Green, tinged by an Acid, and corrupted, or Yellow, and after a while turning Green, and ſmelling Sowre.

§. 2. Cause.

THE Gripes come upon young Children, from the bad Diet either of the Mother or Nurſe, to wit, when they feed upon Meat that is apt to breed a viſcous Acid, or upon high ſeaſoned Meats, which encreaſe Acrimony of the Bile, or upon Sawces, that are apt to breed an acid Humor.

§. 3. Cure.

Theſe things premiſed, the Cure may eaſily be performed, which conſiſts in diſcuſſing of

Wind, and in the Correcting and Carrying off the Cauſes. Among things that diſcuſs Wind, I deſervedly value *aqua carminativa Mynſichti*, Water of Zedoary, Aniſe, Mint, Fenil, adding a drop or two of *Spiritus Anticolicus ex Nitro D. Michaelis*, or *Spiritus Nuri dulcis*. for inſtance;

Take of *Aqua Carminativa*, Water of Fenil, Mint each one Ounce, *Spiritus Nitri dulcis* fix Drops, *theriaca celeſtis* three Grains, *Effentia Citri ſaccharini Zwelferi* what is ſufficient. Mix them. Give a ſpoonful of the mixture.

If inſtead of Spirit of Nitre, one would uſe volatil Spirit of Sal Ammoniack, or any other Spirit Aromatized, he might.

When the matter is both Glutinous and Sharp, we muſt always have an Eye upon Wind, which muſt be diſcuſſed with carminative Clyſters. Etmuller in this Caſe gives ſome Powder of Aniſeed with half Coral, or *Elæoſaccharum Aniſi*, or *Spiritus ſalis Ammoniacki volatilis aniſatus*. Gripes cauſed by Wind are alſo ſtopt with Opiates, ſuch as Syrup of Poppy, or *Laudanum Opiatum* added to Carminative mixtures, as there ſhall

shall be occasion. Externally also in this Case several things will be proper, such as distilled Oyl of Chamomil, Fenil Caraway, Aniseed, Orange-peel, mixt with boyled Oyls of Dill, Worms, Castor, also *Oleum Carminativum Myrsicis*, *Emplastrum de baccis Lauri*, applyed all over the Belly. Bags filled with Carminative Herbs may be applyed to the Belly.

When a Glutinous matter is the Cause, cutters of Phlegm are good, which are generally the forementioned Carminatives. When these things have been given, the tough matter must be carried off, by Manna, Syrup of Cichory with Rhubarb, of Peach-flowers, Roses Solutive with Senna, sharpened with a little Resin of Jalap. But when Children cannot bear Purg-ing, the Nurse must take a large Dose, that the virtue of the Pur-gatives may with the Milk be communicated to the Children. If the Belly be swelled with Wind, and there be glutinous Matter besides, it will be best to give a Clyster before Purg-ing. Externally you may use the following Oyntment;

Take of Gum Ammoniack half an Ounce, Turpentine three Drachms, Aloes, Myrrh each one Drachm, Ox's Gall one Scruple. Mix them. With Deer's Suet make an Unguent of a due consistence.

When an acid Acrimony is joyn-ed with the foresaid Wind, or offends alone, the Cure of the Gripes will consist, 1. In removing all the external Causes. 2. In Correcting the Acid in the

Mother or Nurse. 3. In Correcting the Acid in the Child.

External Causes must be removed; such as acid Food, Sawces, or Physick, used immoderately by the Mother or Nurse. The Passions of the Mind must be avoided, Grief, Fear, and Anger. For if any such thing happen, the Breast must be drawn, before the Child suck.

The Acid may be Corrected by Spirituous and Oily things, and by fixt and volatil Salts, whether manifest or latent in Coral, Pearl, Crabs-Eyes, &c.

And to discharge this Acid, when Corrected, Aromatick Diureticks are good. This same Acid also is corrected and expelled by Sweat.

To temper the Acid in the Child, which frets the Guts, Absorbents and Precipitants are proper. *Pulvis specificus Ettmulleri* rarely fails in this Case;

Take of Crabs-Eyes prepared half a Drachm, Harts-horn prepared without Fire one Scruple, red Coral prepared half a Scruple, red Myrrh, Castor each five Grains, *theriaca celestis* four Grains. Mix them. Make a fine Powder. The Dose is from half a Scruple to a Scruple.

If you fear the Gripes may put the Child into Fits, as they often do, then volatil Salts will be proper. The following or some such mixture may be given by spoonfuls;

Take of Water of Flowers of Linden-tree, Fenil each one Ounce, *Spiritus salis Ammoniaci anisatus*
X x x

satus half a Drachm, Crabs-Eyes prepared one Scruple, Native Cinnabar half a Scruple, *theriaca celestis* three Grains, Syrup of Mint half an Ounce. Mix them.

Or give the following Powder;

Take of *pulvis Marchionis* one Scruple, *aurum fulminans* three Grains, depurated Nitre two Grains. Make a Powder. Divide it into four equal parts. Or,

Take of *pulvis Absorbens Wedelii* one Scruple, Cinnabar of Antimony seven Grains, Castor pre-

pared six Grains, *theriaca celestis* two Grains. The Dose is from half a Scruple to fifteen Grains.

In this Disease I have with good success given *pulvis absorbens Ludovici* and *Wedelii*. Opiates are sometimes sufficient. *Theriaca celestis* or Mithridate may with a little Cotton, be put into the Navil.

Externally the foresaid Carminative and Aromatick Oyls are proper.

These said Medicines may also be given in green Stools, which proceed from a preternatural Acid.

CHAP.

C H A P. IV.

Of Belching, Hiccough, Nauseousness, Heart-burn, Vomiting, but especially of Curdling of the Milk.

§. 1.

Children new born have often disaffected Stomachs, whence come Belching, Hiccough, Nauseousness, Heart-burn, and several sorts of Vomiting. No wonder, if a great deal of an acid, tough *Mucus* which may easily be bred of corrupt Milk, create trouble to the Stomach, and when this *Mucus* ferments, it turns to Wind; no wonder if there be Belching: but if it turn not to Wind, and cleave to the Orifice of the Stomach, it must needs by its Acrimony, vellitate and corrode those nervous Parts, and so cause the Heart-burn. If the *Mucus* pass not by the *Pylorus*, the Appetite must needs be destroyed. If the Stomach be irritated and spasmodically contracted, Vomiting must needs ensue, which sometimes does the Child good, especially if it Vomits a green *Mucus*.

§. 2.

Hiccoughing is caused by Milk corrupted and coagulated by an Acid, especially if an acid *Mucus* stick to the upper Orifice of the Stomach, because of the sensible Nerves. Hereupon, by reason of its firm Connexion with the Diaphragm, this convulsive Contraction is caused, which they call the *Hiccough*.

§. 3. Cause.

FOR the most part therefore it is an acid Acrimony, which irritates the upper Orifice of the Stomach, and draws the Diaphragm into consent.

§. 4.

And since Belching, Vomiting, Hiccough, Nauseousness, and Heart-burn, differ little in their Causes, so with a very small alteration, they require the same Cure; namely things that dispel Wind, cure Belching, such as the Carminatives mentioned in the foregoing Chapter.

In a Heart-burn arising from a Sharp, viscid Humor, sticking to the Mouth of the Stomach, all that corrects that viscid Acrimony is good, especially *essentia carminativa Wedelii*, mixt with essence of Castor, of *Opium*, internal and external Carminatives, and strengthening Nervines. I have often given the following Powder, with good success in mint Water. For Mint and its Water is *Sylvius* his Specifick in the Hiccough;

Take of Powder of Nutmeg half a Drachm, Crabs-Eyes prepared one Scruple, Castor half a Scruple, red Coral prepared, Cloves each one Scruple, distilled Oyl of Mint two Grains, *theriaca caelestis* three Grains. Mix them. Make a subtil Powder. The Dose is half a Scruple.

Those that are Elder may take now, and then a spoonful of the following mixture;

Take of Water of Mint two Ounces, Cinnamon one Ounce, tincture of Amber one Scruple, *essentia Anodyna* half a Drachm, Syrup of Mint two Drachms. Mix them.

If the Contraction of the Stomach be great, and Fits be feared, then we must have recourse to Cannabarinés and Opiates; in which case the following Powder is famous;

Take of Cinnabar of Antimony two Grains, *aurum fulminans*, *theriaca caelestis* each one Grain. Mix them for a Dose. Or give the quantity of a Pea

of Mithridate or Venice-Treacle.

Sylvius in Childrens Nauseousness and Vomiting commends *Spiritus nitri dulcis*, and Opiates. To the Elder he gives, for the Hiccough, a Vomit. Then he gives *pulvis Foetis*, highly valued by *Ettmuller* in the Hiccough. It is made of Harts-horn and prepared Coral, adding a drop or two of distilled Oyl of Cinnamon or Aniseed. He commends Aniseeds for elder Peoples Hiccough externally and internally, and Castor likewise. If the Vomit be Idiopathick, and there be a Nauseousness and Shortness of Breath, it must not be stopt, until the peccant Matter be thrown off. When that is done, the Stomach must be strengthened with the following Balsamick mixture;

Take of Cinnamon Water one Ounce and an half, Spirit of Mastic one Drachm, Essence of *terra Japonica* one Scruple, Syrup of Cinnamon half an Ounce. Mix them take a spoonful, now and then.

This Powder is *Ettmuller's*;

Take of Nutmeg one Drachm, red Coral, Cloves each half a Drachm. Mix them. Give a little at a time.

He values Treacle inwardly and outwardly. And for such as are weaned half a Drachm of Cloves, and two Scruples of Mastic boyled in Wine. I look upon this as an useful Medicine in all these Cases;

Take

Take of *pulvis Bezoardicus* one Drachm, Crabs-Eyes prepared, Cinnabar of Antimony each one Scruple, Castor half a Scruple, *theriaca caelestis* four Grains, destilled Oyl of Cinnamon, destilled Oyl of Mint each one drop. Mix them. The Dose is from five Grains to ten.

In want of Appetite, I first give a Vomit, and then *Sal volatile Cinnamonifatum* with Essence of Balsam of Peru; or *terra Catechu*, adding some drops of Oyl of Cinnamon, or Mint, or Mace or some Aromatick destilled Oyl.

In all these Diseases externals are good; Liniments, Oyls, Plasters, Cere cloths, and Spirituous things must be applied to the Stomach and Belly. Here my external Balsamick mixture of Chocolate, *Confectio Alkermes*, Oyl of Nutmeg, Balsam of Peru, Cinnamon and Sack is excellent. *Oleum Stomachicum Cratonis*, Oyl of Mint, Mace, Cinnamon, &c. also a Cerecloth of *Laudanum* and *Tacamahaca* will be good. And Spirituous things, such as Spirit of Mint, Mastich, Lily Conval, *theriacalis*

camphoratus, &c. Bread dipt in Sack, and sprinkled with Oyl of Mace or Cinnamon, applied to the Stomach is good. In Vomiting Opiates, such as *theriaca caelestis*, may be put into the Navil, or a Plaster of Treacle may be applied. If the Excrements be variegated, Clysters give great relief. Our red Plaster applied to the Belly is good in all these cases;

Take of Gum *Tacamahaca* one Ounce and an half, Myrrh six Drachms, Mastich two Drachms, Powder of red Saunders one Ounce and an half, red Roses half an Ounce, Oyl of Nutmeg by expression two Drachms, Mastich, Wormwood each what is sufficient, Wax what is sufficient. Boyl them to the consistence of a Plaster.

Emplastrum de crusta panis may be mixt with Oyl of Mastich, and a Cataplasim of sowre Leven, and Powder of Mint, red Roses, Frankincense, Mastich and Rose Vinegar is good; or a bag of Appropriate Herbs. You may see more *L. 1. Cap. 3.*

Xxx 3

CHAP.

C H A P. V.

Of Loosness and Costiveness.

§. 1.

NOT only Children's Stomachs, but their Guts likewise are out of order, sometimes being Loose, and sometimes Costive. Children are generally troubled with Loosenesses about the time they breed their Teeth; and if a Looseness turn to the Bloody-Flux, it proves generally Fatal.

§. 2. *Cause.*

A Looseness proceeds either from some fault in the Milk, or from Corruption of Food, or from some sharp Matter gathered in the Guts. Costiveness arises from a tough Matter, which is also Austere, and contracts the Guts.

§. 3. *Cure of a Looseness.*

THE cure of a Looseness consists in the above-said Stomachicks. At first Abstergents are good, as a decoction of Barly with Syrup of Roses Solutive, and astringent Balsamicks both inwardly and outwardly. Here all Carminatives, Theriacals, Imbibers, Bezoardicks, Opiates, &c. are proper. This following is excellent to remove the Pains and Convulsions of the Guts, and to stop any Looseness, or to take off the Acrimony.

Take of *essentia theriacalis* one Drachm, *Anodyna* half a Scruple, Balsam of *Peru* one Scruple. Mix them. The Dose is a few drops, according to the Age of the Patient, and the urgency of the Symptoms.

Magistery of Coral with Citron juice, Ivory prepared without Fire, Nutmeg, Mastich, *Aqua Cinnamonum Cydoniata*, Syrup of Coral,

Coral, of dried Roses, Spirit of Mastic, *theriaca Andromachi* and *caelestis*, and *Laudanum Opiatum Cydoniatum Hoffmani* are excellent Medicines; for instance;

Take of Water of Plantain one Ounce, *Aqua Cinnamomi Cydoniata* half an Ounce, Syrup of Coral one Ounce, Spirit of Mastic one Drachm. Mix them.

Take of Magistery of Coral, with Citron juice, Ivory prepared without Fire each one Drachm, *terra Catechu* one Scruple. Mix them for several times taking.

Externally Oyl of Quinces, Mastic, Myrtle, Nutmeg by expression, *Unguentum Comitis*, and the abovesaid Cataplasms and Plasters, are proper.

§. 4. Cause of Costiveness.

Children are bound because either of a tough Paste, which dulls the sense, because Bile flows not to the Guts which should be the *Stimulus*; or of an Austere, either in the Pancreatick juice or in the Bile.

§. 5. Cure of Costiveness.

Costiveness in Children is cured by Lenitives, which must be given both to the Nurse and the Child. The Nurse may take Broth with leaves of Senna, and Aniseeds boyled in it. The Child may take a Clyster of sweet Milk, with Turpentine, and Yolks of Eggs dissolved in it. If the obstruction be pertinacious, I use to put in a little *aqua benedicta*, and then give Manna in Broth. If the matter be Viscid, and the Child elder, I give as many Grains of Powder of Jalap in Syrup, as the Child is years old: Or I give a Pill of *Pilula Angelica* or *Aloëtica*, or according to *Ettmuller*, Syrup of Buckthron alone, or mixt with Syrup of Fumitory. For Children that are weaned, he advises some Grains of *Mercurius dulcis*, which dissolves the Mucus, and kills Worms; a Grain or two may be given in Milk or Pap. I usually give a spoonful or two of the following Potion according to the Nature of the Disease and the Age;

Take of leaves of Senna one Drachm and an half, Seeds of Anise, Fenil each one Drachm, Acid of Tartar half a Drachm. Infuse them a night in Mallow or Mercury Water. Boyl them in the Morning on a gentle Fire. In three Ounces of the Colature dissolve one Ounce and an half of Manna. Strain it again, and add of Syrup of Cichory

X x x 4

with

with Rhubarb six Drachms,
Powder of Jalap half a Scruple.
Mix them.

Outwardly the Belly and Navil
may be anoynted with warm Oyl
of Chamomil, wherein a little
Coloquintida has been boyled,
or the Belly may be anoynted
with *Unguentum de Artbanita*,
which I have often found success
by. Goose or Hen's Grease,
applied with the outer rind of
Walnuts is good; or Suppositories

may be made of Honey with
hiera picra; or a Fig fastned to a
thred may be thrust up the In-
testinum rectum. If you would
have a Liniment. This or some
such may be made;

Take of *Unguentum de Artbanita*
two Drachms, Ox's Gall in-
spissated one Drachm, Aloes
half a Drachm, Oyl of Colo-
quintida half a Scruple. Mix
them. Make a Liniment.

CHAP.

C H A P. VI.

Of a Thrush.

§. 1.

A Thrush, which is vulgarly, but erroneously, held to be Ulcers, in some slight Eschars, that arise in the heads of certain Pustules in the Mouth, fall off and come again, of divers Colours, and with various Accidents. Sometimes it comes in one part of the Mouth, sometimes in another, and sometimes in the Oesophagus, Stomach, Guts, and the *Aspera Arteria*. It is of various Colours, whereof *Sylvius de Aphthis* gives a reason, and derives it from Bile, joyned with an Acid in a different manner. Some Thrushes are soft and moist, others harsh and dry; some stick lightly to the parts, and fall off easily, others stick fast, and are removed with difficulty; some are confluent, others distinct.

§. 2. Diagnostick and Cause.

A Thrush is easie to be seen, sometimes like a crust, it makes as it were but one Ulcer, fretting the Cuticle, but not consuming the Flesh, as other Ulcers do. It begins at the Gums, afterwards it creeps to the Tongue,

Palate, all over the Mouth and Jaws, and by the Continuity of the Coat runs quite down the *Oesophagus*, Stomach and Guts. Children get it by the Corruption of the Milk, and an Acrimony and Acefence ensuing upon it, which frets and excoriates the Membranes of the foresaid parts. Some blame an acid *Lympha*. But the foundation of the peccant Acid is in the Stomach, from the Corruption of the Milk. *Etmuller* thinks, that the Acidity exhales from the Stomach, and these sharp Vapors, while they stick to the Parts, or are mingled with the *Saliva*, do by their Acrimony raise Pustules, like Eschars raised by Art. It sometimes (though rarely) proceeds from Agues, and more frequently from continual Fevers, and other Diseases, when Crude, Porraceous recrements ly in the Stomach.

§. 3. Prognostick.

THE event is various, according to the variety of the Thrush and its Causes. A sharp, Symptomattick Thrush is bad, a Critical one is better. It is a good one, that comes presently, and takes up but little room, if it be dispersed only here and there, if it be white, soft and moist, if it fall off

off in washing, tho it comes again, if it diminish the Disease, if it be attended with Salivation; for usually it goes away with Salivation. On the contrary that is bad, which is Livid, or Yellow, or Black, or Dry, which gives no relief, which runs all into one, and which augments the Disease.

§. 4. Cure.

THE Cure consists in correcting the Acid, in hindring it from breeding anew, in ripening and healing it. The Yolk of an Egg mixt with Rose-water and Sugar-Candy, strangely corrects the Acid in a Thrush. The juice of Turneps laid to a Thrush, with a little Honey or Sugar does the same. Juice of Grey-fish, and Speedwel is good. This that follows, seldom fails me, wherewith every day once or twice I rub the Mouth, with an Instrument wrapt in a Cloth;

Take one Yolk of an Egg, of clarified Honey two Drachms, juice of Speedwel, Turneps each half an Ounce, Saffron six Grains, Mace half a Scruple,

Water of Speedwel and Roses each what is sufficient.

Fresh Beer, Whey, Beer altered with Figs and Liquorice, and Syrup of Jujubes are good to wash the Mouth. A Decoction of Speedwel, oleous and mucilaginous things, such as *Psyllium* and Quinces, must be given between whites, with Honey or Water, wherein Steel has been quenched, and Sage and Honey boyled.

You must take a care of Sharp things, especially Acid and Salt, Spirit of Vitriol, Sulphur, Salt, Nitre, &c. which do a Thrush much harm. We must not be forward to purge in this Disease, because a Looseness might follow, which is very bad. Therefore a Stool may be procured by a Fig. Then the gentle Sudorifick following may be given;

Take of *Bezoardicum Minerale* from one Grain to five, Bezoar stone from three Grains to seven, Saffron from two Grains to six. Mix them. Make a Powder.

CHAP.

C H A P. VII.

Of Fits.

§. 1.

THE falling Sickness in grown Persons has great Affinity with Fits in Children, only with this Difference, Children have it by Sympathy with the Stomach and Guts. And both in the Stomach and Guts an Acid is the Cause, as the cruginous, porraceous and black Excrements do testify. Sometimes Worms, sometimes Teeth, are the Cause; and oftentimes before the coming out of the Small Pox or Measles, Children have Fits.

§. 2. *Prognostick.*

WHEN Children yawn and stretch often, have a Quivering in their Eyes and Eye-lids, when their Hands shake, their Arms extend, when they start and tremble, and when they wake too much, Fits may be feared. If Fits be dangerous in grown Persons, without doubt they will be so in Children, when Froth appears about the Mouth, and when they shriek much. And they that in the Fit hold their Breath, or void their Excrements

involuntarily, and after the Fit are much changed, do dy.

§. 3. *Cure.*

THE Cure of the Fits in Children consists in a due Regulation of the Non-naturals, especially of the Meat and Drink. Nothing corruptible must be given, as Milk-meats, which are apt to curdle on the Stomach.

On the contrary their Meat must be of a good Juice; Pap therefore may be made of Broth and Bread, without any Fat or Salt. The drink must be Barly Water boyled with Aniseed, Liquorice and such things.

If you suspect an Acid, then a kindly Purge and a gentle Vomit will be good. Or a Clyster of Whey and Honey, or a Suppository may be given of a Candle, Venice Soap, red Beet, or a Parsly Stalk, &c.

Afterwards all things are good that imbibe an Acid, viz. Fossil and Sea Unicorn, *Bezoar*, *Pulvis Marchionis*, Harts-horn, Man's Skull, Coral, Elks Hoof, *Magisterium Luna*, and a thousand other things. Cinnabarines exalted with *Laudanum Opiatum*, or some Anodyne, are good; or joyned with

with Precipitants. This is an excellent Powder following;

Take of Cinnabar of Antimony, Man's Skull prepared, Elks Hoof prepared each half a Drachm, Powder of the Heart and Lungs of a Mole two Scruples, *Bezoardicum Lunæ*, Emerald each one Scruple, Saffron half a Scruple, Amber-grife two Grains. Mix them.

Cinnabar of Antimony imbued well with *Clyffus* made of Antimony and Sulphur is accounted a great *Arcanum* in Fits.

Ettmuller magnifies the Meal found upon Clubmoss, because it is of a Sulphureous Nature and takes fire and cracks like Gun-Powder. Half a Scruple may be given. I have tried half a Scruple of Earth-Worms dried and powdered in a convenient Vehicle, and Ashes of a Mole, and have had good Success. Or such a Powder may be given;

Take of humane Secundine, red Coral prepared, Man's Skull prepared each three Grains, Oyl of Amber one Drop. Mix and give it in a proper Vehicle.

Many commend *Aurum fulminans* and Nitre, Spirit of Linden Tree Flowers, black Cherry, Flowers of Peony, Lily Conval, Flowers of *Stæchas*, Orange and the like, drawn after Fermentation are as good, and so are

Amber and Musk. All Medicines of Castor are good against an Acid, and so are Medicines made of Treacle, and Opiates, volatil Balsamicks, such as *Liquor Cornu Cervi succinatus*, are good. Or, for Sucking Children this Powder;

Take of Crabs Eyes prepared twelve Grains, Cinnabar of Antimony four Grains. Mix them. Make a Powder. Divide it into four Parts.

§. 4.

Externally also, to correct the Acid, a Plaster may be applied to the Brain, Stomach, and Navil, of Treacle, adding a little Oyl of Amber, Amber-grife, Musk; or a *Galbanum* Plaster, with the same added. The Nostrils may be anointed with Oyl of Amber or Rew; and Spirit of Sal Ammoniack, or some other volatil Spirits may be held to the Nöse.

Frictions of the lower Parts must not be neglected. Blisters may be drawn behind the Ears and on the Wrists, or Cauterics may be made in the Head. But because of the Torture, I never used them.

The Head must be strengthened with Caps; *Emplastrum epilepticum Cratonis*, and *Mynsichti* must be applied to the

the Crown of the Head, and must be worn Day and Night. The Stomach and Guts must be fenced with Internals and Externals.

Paoxy Root, Wolf's Tooth, Elk's Hoof, Coral, and Eme-

rauld worn about the Neck are thought to do good.

If Fits come from Breeding of Teeth or from Worms, then such Remedies are proper as are good for those Diseases. Of which in their Places.

CHAP.

C H A P. VIII.

Of difficult Breeding of Teeth.

§. I.

THough some (as Histories record) are born with their Teeth; yet such Instances are rare. The Eye-Teeth, called *Canini* or *Incisores*, cut about the eighth Month they are sometimes a Year, seldom two, and very rarely three in coming. There is a true and a false Dentition. A False is nothing but a Swelling of the hind Part of the Gums into a sharp Protuberance, hindring the Child from Sucking, arising from Afflux of sharp Humors resembling the Cutting of Teeth.

The *Germen* of a Tooth in the Jaws is mucous and thin, like the White of an Egg, contained in its Cell, which Day by Day grows harder, till the Matter, being thoroughly hardened, breaks through, which perruption occasions many Symptoms to poor Infants, the chief whereof *Hippocrates* reckons up, S. 3. *Aph.* 25. When they begin to breed Teeth, troublesome Itch-

ing of the Gums, Fevers, Convulsions, and Loosnesses arise, especially when they breed the Eye-Teeth, and when Children are gross and costive. The true Signs of Dentition are taken from the time (which varies much) and Occurrences about the Mouth, viz. if they put their Fingers or any thing else in their Mouths, when they bite the Nurses Nipple, when there is an inward Heat in the Mouth, Redness in the Cheeks and Whiteness in the Gum. Itching and Pain proceed from the Teeths velli-cating the nervous Fibres, in cutting the Gum, and the sharper the Tooth is the more exquisite the Pain, which made *Hippocrates* blame the Eye-Teeth, as the Authors of worse Symptoms than any of the rest.

And this Pain is augmented by the Afflux of a sharp *Lympha* through former Pain, whereby not only the Gums, but the tender Teeth themselves may be afflicted, as in the Tooth-ach of grown Persons. *Sylvius* will have the Blood to be

be extravasated and stagnate, which causes Swelling, Pain and other Symptoms.

The frequent Salivation depends upon Pain, Commotion of the Spirits, the Acrimony and Fluidity of the *Lympha*. For by Pain the Vessels of the Glands, especially the Membranes enclosing them, are usually, vellicated and contracted, and so comes the plentiful Effusion of *Saliva* into the Mouth. And this *Saliva* is continually running along the Throat into the Stomach. If the *Saliva* be kindly and natural, the Defluxion proves harmless. If it be sharp, it irritates and corrodes the Throat, and raises a dry Cough. If it fall upon the Stomach it causes Vomiting, Loss of Appetite, and many Mischiefs more. When it passes to the Guts, it likewise irritates the miliary Glands, and makes them pour out more Matter to it, which occasions a Loosness, so usual in Breeding of Teeth. How Fits and Frights come may easily be gathered from what has been already said.

§. 2. *Prognostick.*

Dentition has some Danger in it. And there is most according to *Hippocrates*, when a Child breeds its Teeth with a Cough. There is good Hope, when a Tooth cuts quickly, when the Child is not diseased before, when the Symptoms are remiss, especially if there be no Convulsions, but all the Sym-

ptoms vanish of themselves, like a light extinguished, or a Thorn pulled out, but if a Tooth be slow in cutting, if the Symptoms daily encrease, and when one is gone another comes, when the Child's Strength is gone, the Case proves Mortal.

§. 3. *Cure.*

ALL Endeavours must be used, to promote the Cutting of the Tooth, to remove all Obstacles, and to mitigate the urgent Symptoms. First of all the Belly must be kept loose if it be costive, by Clysters, or *Manna*, or Syrup of Cichory with Rhubarb or Powder of Jalap. The Gums must be anointed with *May* Butter mixt with Liquorice Powder, the Fat of a Hen, Goose, Duck, Quail, or a Hare are good, to which last and the Brains much is attributed. They commend also the Brain of a Calf or Lamb, and Oyl of white Lilies, Sweet Almonds, Chamomil, Cream, Honey of Roses, Mucilage of Seed of *Psyllium* and Line, Juice of live Crabs with Water of Blew-bottle Flowers. A peice of Bacon, Marsh-Mallow or Florentine *Iris* Root may be given Children to be constantly sucking. Some commend new Figs split and applied to the Gums. *Timeus* and others commend a Drop or two of the Blood of a Cock's Comb hot rubbed upon the Gums. *Estmuller* has a better Remedy; namely,

namely, the Marrow of a Calfs Leg, and Oyl of Sweet Almonds applied to the Cheek, or a Bag of emollient Herbs and Flowers or only of Chamomil Flowers, or a Plaster of Treacle may be applied to the Cheek. The Women use Coral and other hard things to rub Children's Gums with, which are naught. And

I take all their Amulets to have no other Virtue, but the Imposers Imagination. It is proper sometime to lance or open the Gum, and to draw Blisters, make an Issue, and apply Leaches.

This is *Willis* his Way. If there be much Pain and want of Sleep, a Drachm or two of *Diacodium* may be given.

CHAP.

C H A P. IX.

Of Children's Cough and Asthma.

§. 1. Cause.

A Cough and *Asthma*, are two of the most troublesome Diseases to Children. They arise generally from an acid, mucilaginous Matter, fluctuating in the Stomach which contracts the pectoral Muscles serving for Respiration, and the *Bronchia* and their Fibres likewise, whence a Cough and Hooping proceed.

§. 2.

Children also have a moist Brain, and a salt sharp Liquor always trickling down from thence, must irritate the Throat as it passes, and so cause sometimes a hooping Cough, and some of it getting into the *Bronchia*, turns to an acid viscid Matter, which must needs cause an *Asthma*.

§. 3. Prognostick.

IF Vomiting and Sneezing follow, it is good; but if Convulsions and other bad Symptoms appear, there is no Hope.

§. 4. Cure.

THE Cure consists in getting the acid, viscid Matter out of the Stomach presently,

for which purpose a Vomit gives present Relief and Ease; and in dissolving the Reliques of the acid, mucilaginous Matter by Incisers. This or the like Mixture will not be improper;

Take of Water of Hyssop, Mint, Fenil each one Ounce, *Tinctura Proprietatis* half a Drachm, Syrup of Tobacco half an Ounce. Mix, and give a Spoonful at a time. Or;

Take of *Oxymel* of Squills, Syrup of Colts-foot each one Ounce, Syrup of Radish Juice half an Ounce, *Balsamus Sulphuris anisatus* five Drops. Mix and give it to lick.

Or Juice of Radish prepared with Sugar may be given by it self or by turns. Or a little of the following Powder may be given in Milk, Broth or Pap; especially if there be an *Asthma*.

Take of *Species diatreos*, *Facula Ari* each one Drachm, Man's Skull, *Succinum Cartarrhale* each one Scruple. Mix and give it.

If there be Costiveness and an *Asthma* besides, this following is good at times in Pap;

Y y y

Take

Take of Jalap one Drachm and an half, *Fæcula Bryoniæ* two Scruples, *Succinum catarrhale* one Scruple. Mix them for several Doses.

If the Cough come from a sharp *Lympha*, infesting the *Larynx*, and from a cold Air, half a Scruple or a Scruple of *Sperma Ceti* is good: Or a Spoonful of the following Mixture now and then;

Take of Water of Mint, Fenil each one Ounce, Orange Pill half an Ounce, *Spiritus Salis Ammoniaci anisatus* twelve Drops, Oyl of Mint distilled one Drop, Syrup of Colts-foot six Drachms. Mix them. A Grain or two of *Tberiacæ Cælestis* may be put into it.

Let the Nurse take the pectoral Decoction.

In more adult Children for an *Asthma* with Wheezing *Decoctum Spleneticum Mynsichti* is excellent, and Bleeding likewise, especially if the Child be above five years old.

Liquor Cornu Cervi succinatus and native *Cinnabar* are the best Medicines.

Crato and *Etmuller* do in this

case commend, as a Specifick, a Decoction of Turneps sweetned with Sugar.

Among Externals the chief are Powder of Mastich, *Olibanum* or Amber applied with Flax to the Head, or a Plaster of *Ceratum pro bregmate usitatum*, and *Tacamabaca* each alike, mixt up with a little Oyl of Mastich and applied to the Crown of the Head.

If it proceed from the too great Dilatation of the Glands of the Brain, a Fume is proper of Gum Juniper, Amber, Frankincense, Mastich, *Benzoin*, and red Roses; and the Fume may be received in Cotton and applied to the Crown of the Head.

The Breast may be anointed with several pectoral Oyntments Oyl of Sweet Almonds, *Iris*, &c.

Take of *Unguentum pectorale* half an Ounce, *Resumprivum* two Drachms, Oyl of Sweet Almonds three Drachms, *Sperma Ceti* half a Drachm. Or;

Take of Oyl of white Lily, *Iris* each two Drachms, Saffron one Scruple. Mix them.

The Soles of the Feet may be anointed with the Fat of a Pike-Fish, or with Goats Suet.

C H A P.

C H A P. X.

Of Worms.

§. 1.

Worms spare neither Sex nor Age; but they trouble Children the most. The Child in the Womb is not free from them; for I opened one that died as soon as it was born, and found a Lump of Worms in its Belly.

§. 2. Description.

Worms are *living, long Animals, bred in several parts of the Body*; but chiefly in the Stomach and Guts. They are either the common large, long and round Worms, or the small Maw Worms, or the broad Worm, which is found in the large Guts, especially in the Colon.

§. 3. Signs.

Signs of Worms in Children, are Rumbling and Pain in the Guts; sometimes Want, and sometimes Excess of Appetite, and so of Thirst. Shortness of Breath, a slowe thinking Breath, and a short Cough accompany them. The Nose itches, they start in their Sleep, they look pale and sickly in the Face, they have a blew Circle under their

Eyes, their Eyes sink, they are very Lean, at length they are troubled with a Palpitation of the Heart, Swoonings, Convulsions, and Epilepsie.

§. 4. Cause.

THE Galenists blame sometimes a putrid, sometimes the native Heat and sometimes both, as the efficient Cause. The material Cause they make to be sweet Phlegm (which putrefies) and Meats that breed it, as Cheefe and Fruit, and any thing that they do not digest, as Flesh Meat, when they suck the Breast, and sometimes Milk alone.

§. 5.

Helmont thinks Worms are bred in the Duodenum, and not in the Stomach, but of half digested Food.

§. 6.

Spiritus holds, that Worms come from Cramming too much Food, especially Flesh and Fruit, because they do not ferment well, and therefore lie crude a long time in the *Intestinum tenue*, and by little and little corrupting, breed Worms. From the Corruption of which Food,

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he

he says, sharp Vapors arise, which dispersing themselves abroad, prick first the Guts, then the Stomach, and sometimes rising up the Throat, and so into the Nose, cause an Itching there. These Vapors are carried likewise by the lacteal Vessels to the Heart, and so cause a Fever; if to the Head, they occasion the Epilepsie and Convulsions.

§. 7.

Our Opinion is, that Worms arise not from Putrefaction; but the Reason why they are found in the Guts is this, Because Eggs which are either blown by Flies upon Meat, or Eggs bred in the Food, are often eaten with the Food, and are not destroyed in a Stomach that has little heat in it, such as Childrens is, (and *Helmont* derives Worms from a Vital Excrement) but bring forth, and so Worms are bred of the Food (but according as the Eggs of Different Flies are eaten, or as Heat is weaker, so divers sorts of Worms are bred) which finding Nutriment in the Guts, tarry there, and consume much of the Chyle, and when Chyle is wanting they gnaw the very Guts, and so by vellicating the Fibres they not only cause sharp Pains and a Fever; but I have seen the Guts have Holes eaten in them.

The Excrements of the Worms, mixing with the Child's, causes strange Fermentations whose subtil Particles, not squaring with the Pores of the Guts, cannot get through but are pent up, and so cause wind.

Hunger arises because the Worms consume the Chyle, and sharpen the Ferment of the Stomach.

Nauseousness proceeds from pituitous Humors in the Stomachs of such as are troubled with Worms.

§. 8. Prognostick.

Worms discovered in time are not very dangerous; because they may easily be killed and brought away. Vermination is a tedious Disease and not being taken notice of, or neglected, has killed several. Great Worms are reckoned worse than little ones, many than few, living than dead, red than white, and particoloured are worst of all; but there is no great danger in Maw-worms.

§. 9. Cure.

THE Ancients commend divers Purges and Anthelminticks inward and outward, especially things that are bitter, and have a specifick Quality. *Reverius* commends a Cataplasim of *biera picra* applied to the Belly.

§. 10.

THE Chemics commend *Mercurius Vita*, green Spirit of Vitriol, red Oyl of Vitriol, Salt of Antimony, Tincture of Sulphur, *Tartarus vitriolatus* Vinegar of Antimony, and other things made of Mercury.

§. II.

HUINONT commends Water, that has had Quick-silver boyled in it, for killing of Worms in Children, if they drink it, or Worms in Ulcers, if they be washed with it.

§. 12.

SPIBUS commends all things that correct and purge Phlegm, and especially *Mercurius dulcis*. Among things that kill Worms, he reckons all bitter things especially Zedoary, about half a Scruple of the Powder given at a time, taking it once a day. He also commends Spirit of Vitriol or Sulphur dropt in drink, if they are thirsty, not otherwise.

§. 13.

OUR Method is either to kill them and then expel them, or to expel them alive or dead, to evacuate Phlegm and help Fermentation.

The chief things that kill Worms are Roots of Grafs, Sorell, Zedoary, *Acorus*, Gentian, Tanfy, Coral-wort, Angelica, tops of Wormwood, lesser Centaury, *Scordium*, Seed of St. John's Wort, Zedoary, Wormseed, *Mercury*, Harts-horn, Antimony, Medicines of Vitriol, Juice of Limons, acid Spirits, fixt Salts, Cinnabarines, Medicines of Myrrh and Aloes.

I will give you some Specificks, upon my own Experience; first, our golden Powder, made

of native Cinnabar, *Mercurius dulcis*, and Gold. Or;

Take of Myrrh, Zedoary, Citron Pill each half a Drachm, Cinnabar of Antimony one Scruple, Camphore half a Scruple, Oyl of Amber, Rew each one Drop. Mix them. Make a Powder. The Dose from half a Scruple to a whole one in Zedoary Water. Or;

Take of burnt Harts horn, Coral-wort each one Drachm, Gentian Root two Scruples, Myrrh half a Scruple, Oyl of Myrrh three Drops, Tanfy five Drops, white Sugar one Ounce. Mix them. Make a Powder. The Dose one Scruple.

While they are taking these Anthelminticks, a Purge must now and then be given, especially a spirituous and aloetick one. The former Medicines may be taken either in some distilled Water, or in Water wherein Quick-Silver has been boyled. The following Lozenges are readily taken by Children, and are of Excellent use.

Take of Root of Gentian half a Drachm, white Agarick, Seed of Zedoary, Tanfy each one Scruple, burnt Harts-horn, *Mercurius dulcis* each half a Drachm, Sugar dissolved in Gentian Water what is sufficient. Make Trochiscs or Lozenges.

Lozenges of *Diacarthami* are good, and if there be much Phlegm

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Phlegm in the Stomach, a pretty strong Purge may be given;

Take of Syrup of Peach Flowers, Water of St. John's Wort, Purslain each half an Ounce, Powder of Coral-wort one Scruple. Mix and give it.

But because bitter things cannot so well be given to Children in such a Form; therefore we usually drop some *Tinctura Salutaris*, or *Liquor Cornu Cervi succinatus* into their ordinary Drink; or if they be very Nice, we put some shavings of Harts-horn into it. This following is good to kill Worms, to prevent corruption of the Humors, and to keep the Body open. The Dose is between six and ten Drops in a Spoonful of Gentian or some such Water.

Take of *Elixir Vitrioli* one Drachm, Essence of Wormwood half a Drachm. Mix them. Give it as before.

Pulvis Comitum Warwicensis, or *contra Vermes Augustan*. or *Morelli*, prescribed in his Treatise of Fevers, is good.

A Decoction of Earth Worms, washed in Wine and dried, made with Flowers of St. John's Wort and Peach, is good to bring away Worms.

If a Child will take nothing inwardly, a Clyster of Milk is good first, and then;

Take of tops of Wormwood, Tansey, Southernwood each one Pugil, Colloquintida tied in a Rag half a Drachm. Boil

them in Water. To about six or seven Ounces of the Colature add a little *Confectio Hammech*, Honey of Roses and Oyl of Wormwood by Decoction. Mix and give the Clyster.

Several Suppositories may be given. I have seen a Fig bring away Worms.

Among Externals several Oyntments may be used;

Take of *Unguentum contra Vermes Augustanum*, Oxes Gall inspissated each one Drachm detilled Oyl of Wormwood, Tansey each six Drops. Mix them. Or,

Take of *Oleum Diacolocynthides Quercetani* three Drachms, detilled Oyl of Wormwood eight Drops. Mix them. Or;

Take of Oxes Gall, Oyl of Wormwood, Mint each one Ounce and an half, bitter Almonds six Drachms, Powder of Peach Flowers two Drachms, *Aloe hepatica* six Drachms, Wax half an Ounce. Mix them. Make an Oyntment. Or;

Take of live Sulphur, Soot each two Drachms, Root of Elecampane two Drachms and an half. Melt them over the Fire with May Butter, and anoynt the Navil with it.

So *Unguentum de Arthanita* applied to the Navil is said to kill Worms. Or;

Take

Take of Peach Leaves, as many as you please, bruise them, add some Oxes Gall. Make a Cataplasim and apply it to the Navil.

Oyntment made of Fat and Mercury is the most effectual thing to kill Maw-Worms.

Here follow some Empirical things to kill Worms.

The pattern Bone of a Cow, powdered and drunk in Wine.

Crollius commends the white Worms found in the inside of a wild Rose.

Dornereilius commends a Drop of Oyl of Hazel Wood *per descensum* with Bread.

Frid. Hoffmannus says, there is nothing better than Juice of Cresses with Wine and Spirit of Wine for killing of Worms.

Kircher commends Worms, dried and powdered and made up

into a Plaster with Oyl, and so applied to the Stomach.

Varignana commends the drinking of a Decoction of *Stachas* and Lentils, and Elicampane Root in Wine.

Weikardus commends the drinking of Rye and Hop Flowers boyled in Milk.

Wittichius cuts Onions, steeps them all night in Water, and gives the Water to Children to drink.

There is scarce a better Medicine than burnt Harts-horn and Vinegar to be given Children.

Joh. Zapatha commends this following;

Take of Spring Water, or any other proper Water, one Poand, Oyl of Sulphur fifteen or twenty Drops.

Let the Child drink often of this, especially in the Night if it be thirty,

Yyy 4 CHAP.

C H A P. XI.

Of Lice, and a sore on scald Head.

§. 1.

CHildren and the younger sort are most troubled with Lice; yet sometimes, though rarely, elder Persons are so too. For Histories record, that Kings and great Personages have been eaten of them.

§. 2. *Cause of Lice.*

THE Cause is very intricate. Some make it to be the filth of the third Concoction, Others, a terrestrial Portion of the *Lympha*. Others, a putrid Blood; for *Borellus* writes, that he knows some Chymists, who can of humane Blood and Sperm make Flies and Lice. Others think, the Seed of them is carried into the Body.

§. 3.

OUR Opinion is, that thousands of Seeds of Insects lie in the Milk and other Food, which not only are not rightly altered in the Stomach, but afford bad Nourishment, which makes the *Serum* thick, which stagnating a while, and not being discharged by Tran-

spiration, must needs Corrupt, and so the seminal Principles, which before lay occult and oppressed in the *Serum*, having got at Liberty, turn into living Creatures.

Serum usually offends, because Children that are Lousy, are always in a manner troubled with Kernels or Swellings of the Glands about the Neck. And every one knows, that the Glands prepare and distribute the *Serum*, the Acidity whereof causes this Disease.

§. 4. *Cause of sore Heads.*

THE Acidity of the *Serum* also occasions sore Heads and Scald, which differ according as the *Serum* is more or less Acid or Viscous and thick. Such Diseases may also proceed from the preternatural retention of the *Mecum*.

These cutaneous Diseases and Breakings out come in Children, because many heterogeneous and vitious Particles are gathered in the Bodies of Children, because of their Voraciousness, which should be discharged by Transpiration.

§. 5. *Prog-*

§. 5. Prognostick.

Lice are a tedious Disease, sometimes contagious, like the Itch, and sometimes mortal.

Breakings out and scald Heads, are wholesome for Children. They are a good Sign, but a bad Cause; for it were better they never came. However, they free Children from worse Diseases. They are very dangerous, when they strike in. Sometimes they corrode the Skull, and sometimes make Children bald, and turn to running Ulcers.

§. 6. Cure of Lice.

Lice are prevented by a cleanly Diet, Neatness, gentle Purg-ing, forbearing all Cacochymick Food, especially Figs, since it is manifest, they contain abundance of such seminal Principles of Lice in them, and Flesh.

This is a good Purge for a Child of five or six years Old;

Take of Powder of Jalap seven Grains, *Mercurius dulcis* three Grains, *Antimonium diaphoreticum* two Grains, Syrup of Roses Solutive, what you please. Mix, and give it.

A Pill or two of Aloes, now and then is good, for Aloes, Antimonial, Mercurial, Acid, Sharp, Ponderous, and Bitter Medicines are good.

Garlick is good. And so is a Decoction of the Woods drunk for the ordinary drink.

Among Externals, Oynments and Decoctions of Quick-silver are much valued, or *aqua Hermerica*,

or the Cloth wherewith Gold-Smiths wipe gilded things, applied to the Head. But we must have a care how we meddle with Mercury. It were better to wash the Head with water of Aloes, and then to apply a Plaster of Garlick. Or the Head may be washed with Spirit of Wine, in which Staves-acre, and Bay-berries have been infused, or with Spirit of Lavender. Or mix some *cocculi Indi* with juice of Tobacco and Hogs Lard, and anoynt the Head. Or wash with juice of Tobacco, or of Meadow-Saffron. *Foubertus* commends this following;

Take of Ashes of Leeches one Ounce, *Styrax liquidus* half an Ounce, Swines Blood, Wax, each what is sufficient. Mix them. Make an Unguent.

Camphore and Civet are good for an Amulet.

§. 7. Cure of a sore Head.

FOR the Cure of a sore Head, Hydragogues, especially Jalap and *Mercurius dulcis*, are good. All volatil Alkalies are good to take off the acid and viscid Acrimony. I value Viperines. For you cannot imagine what good a few Grains of the Fat of Vipers given in Conserve of Speedwel, does, by causing Sweat. Tincture of Antimony and other Antimoniates are good to promote this Transpiration: for instance;

Take

Take of Harts-horn prepared without Fire, *Antimonium diaphoreticum*, Crab's Eyes each one Scruple, Myrrh half a Scruple. Mix them. Give a Scruple of this Powder, and repeat it.

A Decoction of Wood of *Gua-jacum* or *Sassafras*, Elecampane, Soapwort, Dock, &c. may serve for Drink.

So essence of Fumitory, *Sassafras*, and other things that correct the Serum, are good, such as Syrup of Fumitory or Birch juice, which expels much, and Syrup of Elecampane.

Shavings of Harts-horn, Flowers of Fumitory, Columbine and Scabious may be infused in Beer.

If it come from the Nurse, let her take *Pilule de fumaria*, and Whey, with the juice or essence of Fumitory.

Lotions and Oynments must not be used presently; but give Purgers and Expellers a while, and then use Externals. This is a good Liniment;

Take of Oyntment of Elecampane one Ounce, *Saccharum Saturni*, Camphore, Sulphur each one Drachm, Salt of Tartar half a Drachm. Mix them.

Take of Hog's Lard two Ounces, Sulphur vive half a Drachm, juice of Limons one Drachm. Mix them.

These Oynments make the Pustules dry away and fall off.

Cranes-Bill fried in Butter, and strained through a Linen-cloth,

anoynted all over the Head, to my knowledge, is a good Medicine.

If the Sores are Malignant, Spreading, and come from a sharp Acid, the following Liniment will be proper;

Take of *lapis Calaminaris* two Drachms, Meal mixt with Vinegar or Wine, Resin, what you please. Make them up into a Liniment, and anoynt the Sores.

If the Sores run a thin and sharp Sanies, wash them with Frog-spawn-Water, strew on Powders that imbibe an Acid, and dissolve a Viscid, that dry and deterge, such as Chalk, Amber, burnt Harts-horn, *lapis Calaminaris*, Ceruss, Myrrh, Flower of Brimstone, *crocus Martis*, &c.

To promote Consolidation, in the end of the Cure we may give *essentia traumatica* with essence of the Woods, and Powder of Man's skull prepared, with Crab's Eyes prepared.

If the Pustules are radicated, *oleum Sulphuris per deliquum* mixt with Oyl of sweet Almonds, is good to anoynt them.

In a Scald, the Head may be washed with a Decoction of Willow, Pellitory, white Blite and Lentils; then anoynt with Bayrus his Oyntment, which I highly value;

Take of Sulphur, Seed of Pellitory each half a Drachm, Soapwort one Ounce. Mix them with juice of Pellitory, and make an Oyntment.

This

This also is a good one of *Jo-
hannes Cekkijus*;

Take of Powder of Bryony, Roses,
Pigeons Dung, green Sulphur
each two Drachms, Blood of a
Tortoise, juice of Bete each one
Ounce, Saffron eight Grains,
Oyl of Juniper, Bays each half
an Ounce. Mix them in a Lea-
den Mortar.

Take of Litharge one Pound,
Strong Vinegar what is sufficient.
Boyl them in a Brass-Vessel two
hours. Pour the Colature into a
large glass Body. Pour upon
it by little and little *oleum tar-
tari per deliquium* what is suffi-
cient. Take the Powder that
is precipitated, and strew it on
the Scald.

CHAP.

C H A P. XII.

Of Children's Consumption.

§. I.

Children's Consumption is called *Atrophia*, *Macies puerorum*, *tabes dorsalis*, *Febris hectica*, and *Phthisis*.

Description.

IT is, a Preternatural wasting of the whole Body and the Parts, through Nutrition being frustrated in Children, arising commonly from an acid and viscid Mucus, obstructing the Orifices and Passages, of the lacteal Vessels, and consequently stuffing the Mesaraick Glands, seldom from the decay of the Viscera, often from the Worms called *Comedones*. A Swelling of the Abdomen generally accompanies this Disease; for in as many as I opened, that died of this Disease, I found the Glands of the Mesentery swelled and obstructed, whereby the parts were deprived of their Nourishment, the passage of it being obstructed, so that the Parts must needs waste, the Blood likewise turning Sharp, and so unfit for Nutrition.

The Dyscrasie of the Nurser's Milk and a bad food does the Child much harm. And the sharp and saline Particles are unfit for Nutrition, which by their corrosive quality do often, like a Chymical *Menstruum*, dissolve and put the Blood in Fusion, and destroy its balsamick Particles; which Union being dissolved, many Particles are discharged insensibly and sensibly by the Pores of the Skin, and other Excretories, as colliquative Sweats, Oily Urine, and Looseness do testify, so that, these things coming, the Parts must needs be deprived of their due Nutrition.

Beside these things, sometimes through a peculiar Pravity and Corruption of Nutriment, Worms lie under Children's skins, which they call *Crinones*, *Dracunculi*, and *Comedones*. The Cause of them is hindrance of Transpiration, and a Stagnation and Corruption of Serum thereupon, and then a Production of occult Seeds. In this case also there is a great Acrimony and Viscidity of the Lympha, so Nutrition is frustrated, the Child cries continually, never Sleeps, and withers like a stick. Many Physicians will not believe, that these are true living Animals, but only vis-
cous

cous Excrements in the shape of Animals. But now it is apparent by the help of Microscopes, as *Etmuller* and I have both of us observed, that they are true and living animals, of an ash colour, with two prominent Horns, round goggle Eyes, and a long hairy tail, horrid to look on.

§. 2.

Children in this Disease eat much and greedily, but do not thrive. The *Comedones* cause an Itching, and irritate the Membranes, which breaks Children of their rest, and makes them cry continually, and then they begin to waft and consume.

§. 3. Prognostick.

A Hippocratical Face is bad. Consumptions, that come from Inflammations, Exulcerations, Swellings, and Obstructions of the Mesentery, are dangerous. If they were born with an obstructed Mesentery, no art can cure them; if viscid Phlegm be the Cause, something may be done by proper means. If the Lungs are ulcerated, there is no Cure.

Convulsions in Consumptive Children are certain Signs of Death. When Sleep does not refresh, the case is bad.

Colliquative Sweats, Looseness, voiding of fatty Matter, by Stool and Urine are ill Signs.

If it come from *Comedones*, it is easily cured, unless it be inveterate.

§. 4. Cure.

THE Cure consists in opening a passage for the Nutriment, which, if the obstruction come from a viscid Matter, we may do by Volatils, and other Aperients, and by gentle Purgers. We may therefore give Damask-Prunes, stewed or boyled with Aperients. While they suck, Syrup of Roses Solutive may be given; but when they are weaned, they can bear no mucid thing, therefore we must forbear Syrups. *Tartarus vitriolatus*, made *Tacbenius* his way, might better be given, or *arcanum duplicatum Myrsichti*: The Dose is as many Grains as the Child is years old. *Tinctura Martis vitriolata* might also do well, two drops for every year the Child is old.

If an Acid also and an Austere do both offend, and contract the Vessels, so that no Nutriment can pass, Crab's Eyes, and terrene things are good, which correct the acid Acrimony of Heterogeneous Salts. I have known several weaned Children cured with the following mixture;

Take of Water of Primrose, Crabs, lesser Centaury, *Antihellica Schroderi* each one Ounce, Shavings of Ivory, Harts-horn prepared, Crabs Eyes prepared each one Scruple, red Coral prepared half a Drachm *tartarus vitriolatus* one Scruple, *Zulapium Rosatum* fix Drachms, or an Ounce. Mix them. Give every day two spoonfuls twice a day.

I also value the following Lozenges, because Children will willingly take them;

Take of *Sal Cachecticus Martis Shroderi*, Crab's Eyes each half a Scruple, *tartarus vitriolatus* fifteen Grains, *lapis Prunelle* six Grains, *species diarrhodon Abbatis* half a Scruple, white Sugar one Ounce or two. Make Lozenges according to Art.

Some do wonderfully commend *Antibecticum Paterii*, *Saccharum Saturni*, Medicines of Myrrh, Antimony, and the like. I lately cured a Child of my own of such a Colliquation by this Medicine following. It had always a Cough after Feeding;

Take of Water of Mint one Ounce, Citron-pill half an Ounce, Spirit of Sal Ammoniack ten drops, Salt of Wormwood five Grains, Oyl of Mint one drop, Syrup of Fenil six Drachms. Mix them, and give a spoonful at a time.

The elder Children may go into a Milk Diet, and use the things prescribed in *Book 3. Chap. of the Heetick Fever*.

Water of tree Ivy, or half a Drachm of the Powder in Water of the same is an excellent Medicine, given several times. The Belly may be anointed Morning and Evening with Capon's Grease.

Among Externals, for sweetning the Mass of Blood, Baths and Fomentations of Milk, and of a Decoction of a Sheep's head and Feet,

which must be boyled till the Flesh will slip from the Bones, and emollient Herbs may be added, root of Marsh-Mallow, leaves of the same, tree Ivy, Fern, Mallow, Violet, Purslane, *St. Johns wort*, Bugloss with the Root, Flowers of Chamomil.

For dissolving the thick Mucilage, when there is a swelling also of the *Abdomen*, *Sykosis* his Oyntment made of *Unguentum Martiatum*, *Dialtheæ*, and *oleum Philosophorum*, will be proper.

Or;

Take of Oyl of Capers, Wormwood, elder each one Ounce, *Unguentum de succis aperitiuis* an Ounce and an half, Gum Ammoniack dissolved in Vinegar half an Ounce. Make a Liniment.

Melilot Plaster may be applied to the *Hypochondria*.

The Grease that is found about the Iron spindle of a Mill-wheel, which has been greased, is good to anoynt with all, also a little fresh Butter, Hog's Lard, Sheep's Suet, and a little Oyl of Wax melted together is good.

If there be colliquative Sweats, *tinctura Antiphthizica*, all Saturnine and Aluminous Medicines give relief.

§. 5. Cure of Worms.

TO cure the *Comedones*, which Cause a *rubes dorsalis*, after the tincture of Antimony, it is good to bathe in fresh Water, with a little Honey in it, the sweetness whereof entices the Worms, and they put their Heads out of the Pores

Pores of the Skin, and then either with the Nails, with a Knife, or Razor, they may be taken off. Or the Women's way may be used, who anoint Children's backs with Honey, which makes the Worms put out their Heads, and so they are cut off with a Razor.

For killing of them *Timeus* commends water of Aloes, to wash the back withal every day. Chafing the Body, with water of

Honey and Meal, is good, which may be scraped off with a Razor, and so the Worms may be got out.

Ettmuller and I are convinced by experience, that a Decoction of Quick-silver is the best, to wash the Child withal in a Bath: for it kills the *Comedones*. You must also give *Antihæcticks* and *Anthelminticks*, mentioned before.

CHAP.

C H A P. XIII.

Of the Rickets.

§. 1.

THE Rickets is, *When through an unequal distribution of the Nutritious juice, for want of it in one place, and too much of it in another, one part wastes away, and another grows over big.*

§. 2. *Signs.*

THE Phenomena of this Disease are a very great head, and here and there divers great Protuberances in it, a wit beyond the Child's Age, swelling of the Abdomen, straitness of Breast, sticking out of the *Cartilago Eniformis*, the Back and Bones crooked, big about the Joints, littleness to stir, they must sit when they play, their back can scarce bear their head, there is shortness of Breath, a Looseness, and a weakness in all the Parts. Sometimes they grow Consumptive, have big Belies, a Cough, and the like Symptoms.

§. 3. *Cause.*

They that write of the Rickets, make the Cause to consist in the obstruction of the spinal Marrow and Nerves, and in the defect of the nervous Influx

depending thereupon. The Serum is also in fault, because the Glands of the Mesentery are obstructed, which makes the Belly to swell.

§. 4. *Prognostick.*

THIS Disease seldom proves mortal, unless through the violence of its Symptoms it turn to a Consumption, Dropsie or some other Disease. They that are not cured, before they are five years old, are sickly all their Life after. The longer the Rickets is coming after the Birth, if it follow a Fever, if the Itch supervene, and the Symptoms abate, the more hope there is. If the Lungs are naught, and the Breast so strait, that they have not room to play, but cause an *Asthma*, and difficulty of Breathing, it is incurable. Adult Persons are not troubled with it, because their Head and Bones are come to their full growth.

§. 5. *Cure.*

THE Cure of the Rickets consists in the removing the viscid Matter, that causes the obstruction of the Nerves and spinal Marrow. The Cure must be begun with Purgings. This is Sydenham's Method;

Take

Take of Tamarinds half an Ounce, leaves of Senna two Drachms, Rhubarb one Drachm and an half. Boyl them in a sufficient quantity of Water. In three Ounces of the Colature dissolve of Manna and Syrup of Roses solutive each one Ounce. Mix them, make a Potion. Let the Child, according to its Age, take a spoonful or two every other Morning for nine days.

But the Purge must be so ordered, as not to give above five or six Stools a day. Then he uses to Anoint the Belly with the following opening Oyntment, continuing it several days;

Take of Oyl of white Lily, Tamarisk each two Ounces, juice of Briony root, Parsly each one Ounce. Boyl them till the juices be consumed, adding of *Unguentum Dialtheae* and fresh Butter each one Ounce, Gum Ammoniack dissolved in Vinegar half an Ounce, yellow Wax what is sufficient. Make a Liniment.

I have cured several by this Method. I Purge the Elder with Jalap, and give our *Unguentum de Osmunda* inwardly, and use it outwardly, Anointing the back Bone and joynts with it. To such as are very tender such a Clyster as this may be given;

Take twenty or thirty *Millepedes* washed in Wine and bruised, pour to them of Posset-drink made with white Wine five Ounces. Strain it, and dissolve

in it of brown Sugar one Ounce and an half.

A Clyster may be sharpened with Salt of Tartar or some lixivial Salt, to dissolve the viscid stuff sticking in the Guts.

The Woods and their Barks, root and leaves of *Osmunda regalis*, Flowers of Spike, all opening roots, all cephalick Herbs, especially *Thea*, all Antiscorbuticks, and things full of volatil Salt, such as *Millepedes*, Earthworms, &c. are accounted specifick Alterers.

Among Chymical things the most famous is the Illustrious Boyl's invention, called *Ens Veneris*, which is made of Sal Ammoniack and Colcothar edulcorated, and twice or thrice sublimed: The Dose is from three Grains to six, in some proper Liqueur, at the time of Sleep. All Ammoniacal Medicines, by reason of their tenuity of Parts, are good to remove Obstructions, the efficients of this Disease. *Mayow* commends this following Ammoniacal Salt.

Take of volatil Salt of Harts horn, Blood or Wine a sufficient quantity, put them into a Viol with a long Neck. Drop to them some rectified Spirit of Salt, or Sulphur *per campanam* rectified, drop by drop, till there is no more Ebullition. Let this dissolved Salt be passed through a Filtre, and evaporated over a gentle Fire, till it is dry. The Dose is from three Grains to six, first in the Morning and last at Night, in a convenient Vehicle.

In the Elder sort, if the *Viscera* be firm, and sound, Chalybeates, Vitriolates, Tartarizates, Castorines and Cinnabarines do the business.

Take of *Osmunda regalis* one Drachm and an half, Male Peony, Citrine Sanders, Cresses Seed each one Scruple, the yellow part of Orange peel Candied three Drachms, Sugar dissolved in *Osmunda regalis*, Water what is sufficient. Make Lozenges of a Drachm weight a piece.

The Child may take half a Drachm or a Drachm twice a day, drinking some of *Mayow's* Water after it. This is it;

Take of root of *Aron*, Male Peony, *Osmunda regalis* or Male Fern each four Ounces, leaves of Sage, Betony, Water-cresses, Brook-lime, Speedwel, Liverwort Fir-tops each three handfuls, green Walnuts half a Pound, *Millepedes* washed three Ounces, Castor one Drachm. When they are cut and bruised, add of white Wine Posset-drink three Quarts, draw it off in a common Still, and put all the Water together. The Dose is an Ounce or two twice a day.

Our Oyntment, which we use inwardly and outwardly is this;

Take of green *Osmunda regalis* six handfuls, red Sage, Pimpernel each one handful, *Fay* leaves, Majoran, Rosemary each one handful and an half, juice of Motherwort, Brooklime, Water-

Cresses, Buck-bean each one Ounce, Juniper Berries one Ounce. Shred them small and bruise them well in a wooden or marble Mortar, with six Pounds of May Butter not Selted. Let them stand fourteen days. Melt it gently in *Balneo Mariae*, and when it begins to ferment, strain it out, and keep the Oyntment for use.

The drink may be a Decoction of root of *Osmund* royal, Male Fern, Sage or Betony, made like Thea, or Thea it self, sweetned with Sugar Candy.

Some bleed, scarifie, apply Leeches, Blisters, and Issues. Rubbing the Spine and Muscular parts, the hollow and not the prominent part of the Bones, with hot woollen Clothes is good. Swinging, Rolling and Exercise are good.

To keep the spine upright, Whale bone or Steel-bodies may be made, or other Chirurgical Instruments.

There was a Man, who got much Money by setting Children straight. His way was this. He had a Pendulous Instrument, so made of swathing Bands, that one Swath went about the Breast, under the Armpits, another went about the Head under the Chin, and there were two handles for the two hands. And the Body was thus held up, till it was brought into due shape.

Fomentations are good, applied to the spine and debilitated Parts. This following is good;

Take of root of *Osmunda regalis* or Male Fern three Ounces, leaves of Betony, Sage, Rosemary, Majoran,

Majoran, Water-Cresses each one handful, Flowers of Chamomil, Melilot, Elder each one Pugil, Berries of Juniper, Bayes each half an Ounce. Boyl them in a sufficient quantity of Spring Water to a Quart. Add a Pint of Wine or Brandy. Keep the Colature for use.

I have found the good effect of *Mayow's Oyntment*;

Take of leaves of Elder, Bay, Majoran, Sage, Rosemary, Betony, tops of Lavander each two handfuls, Berries of Juniper, Bay each one Ounce. Cut and bruise them. Put them in a proper Vessel with three pound of May

Butter, or fresh Butter, never salted, and half a Pint of *Aqua vitæ*. Boyl them gently, to the Consumption of the Water. To the expresseion, while it is hot, add of Oyl of Nutmeg by expresseion half an Ounce, Balsam of *Peru* one Drachm. Mix them. Make an Unguent.

Instead of May Butter you may take Ox's Marrow, Deer's Suet, Oyl of Worms or Fox.

Hot Baths, Natural or Artificial, are good. The Symptoms may be cured, as directed in their proper Chapters. But divers Nervines must be applied to the Spine especially, such as we have already mentioned.

C H A P.

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C H A P. XIV.

Of Galling.

§. I.

Galling is cutaneous Ulcers or excoriations between the Thighs, arising from a saline Acrimony.

§. 2. *Diagnostick.*

IT is not hard to know, because the Parts affected look red and angry; if they be touched or washed, the Child shrieks out lamentably, and so expresses the Pain.

§. 3. *Cause.*

FOR the most part Galling comes from a salt Acrimony, whencesoever that comes, though from without; whether from foul linen, or from the Part's being continually wet with the Urine, and not kept from it. For thus the tender *Epidermis* is so softened and relaxed, that by degrees it is quite eroded and separated. If the Child be very Fat, and often exposed to the cold Air, insensible Transpiration is hindered, which multiplies

a sharp *Serum*, and may contribute to the Galling.

§. 4. *Prognostick.*

THis Galling, if it be neglected, may degenerate into worse Ulcers.

§. 5. *Cure.*

IN the Cure cleanliness must be observed; the Clouts must be clean and smooth, well washed from the saline filth, and dried; or rather sappy wool may be applied to the sore part.

The good Women tie Powder of Cerufs and *lapis calaminaris* in a rag, and so pounce it on the part. Some commend *crocus Martis ex vitriolo præcipitato*. *Ettmuller* commends *terra vitrioli dulcis* or Powder of Chalk, Harts-horn and a little Cerufs, to apply to the part, when it has lost the Cuticle.

But the best and most effectual way is to wash the Groin twice a day with warm Water, or with Rose and Plantain Water.

C H A P. XV.

Of the Stone, Stoppage and Incontinence of Urine.

§. 1.

SToppage of Urine comes in Children not only from the Stone, but from viscous Matter, stopping the passages; yet Children are troubled with the Stone, as one may see sometimes three days after they are Born, when the Clouts have often red Gravel in them. When they are a little Elder, such a sediment is oft observed in the Urine. And this gross sediment may be occasioned by the Milk, gross Food, or by a hereditary disposition.

§. 2.

Incontinence of Urine is familiar to Children, by reason of the imbecillity and resolution of the *Sphincter* Muscle of the Bladder, because of the ferous Intemperature in Children, which often makes it habitual and customary.

§. 3. *Cure of Stoppage of Urine.*

SToppage of Urine is cured by internal and external means, and in Children respect must always be had to the Mucilaginous acid Matter, which must be dissolved. If there be Stones, they must be expelled by gentle means. We therefore give a Scruple of white Amber very finely powdered, mixt with Powder of Crab's Eyes, or Goat's Blood in Milk or Parsly Water, or Birch Water. For the elder sort a decoction of the root of Parsly, Rest-harrow, *Asparagus*, Fenil, Butcher's Broom, &c. will be proper. For Children that are Weaned, *Joel* commends three drops of Spirit of Vitriol in good Wine.

In Spring time juice of Birch is good.

Baths and Oynments are good. Artificial Baths may be made of root of Rest-harrow, leaves of Marsh-Mallow, Mallow, Flowers of Chamomil, &c. After Bathing, the region of the Bladder, and sometimes of the Back may be Anointed with Oyl of Scorpions or white Lily;

Lily; or a Cataplasin of bruised Chervil and Oyl of Chamomil, &c. may be applied to the *Pubes*.

If the Belly be bound, Clysters and Suppositories are good.

Divers things may be given the Nurse, as a Decoction of Rest-harrow root.

When there is a Dysfury or Strangury with it, a spoonful or two of the following or some such mixture may be given,

Take of Water of Parsly, Rest-harrow, Penil each one Ounce, *Spiritus nitri dulcis* half a Scruple, *Syrupus dialthææ Fernelii* fix Drachms. Mix them.

§. 4. Cure of Incontinence of Water.

IN Incontinence of Water, among other things, *Feel's* Powder is good, about half a Scruple or a Scruple of it in Oak leaf Water.

Take of the Stones of a Hare dried one Drachm, the Crop of a Cock burnt, the Bladder of a Hog burnt each half a Drachm, Acorns two Scruples, Seed of Rue, leaves of Nep each one Scruple. Mix them. Make a Powder for use.

You may see more, where we have professedly treated of this Subject.

C H A P.

CHAP. XVI.

Of Agues and Fevers in Children.

§. 1.

WE will now consider the Agues and Fevers of Infants, which often take them away; and therefore do well deserve our consideration.

§. 2. Cause.

These continual Fevers are generally slow, as proceeding from a viscid Acid, wherewith Children abound. Sometimes there are periodical continualls, when in sucking Children the Milk is curdled by an Acid, whence proceed obstructions, which afford Matter, for a febrile Ferment, then this Ferment gets out of its receptacle at certain times into the Blood, and there disturbs its mixtion, whence periodical Fevers and sometimes Agues arise. And if this disturbance and secretion of Blood be violent, the Fever proves Malignant, and appears sometimes with spots, sometimes without. But certain it is, that all Fevers, and especially Agues have their rise from the internal Corruption of Milk, or from the external obstruction of the pores of the Skin. For thereby the perfection of digestion is hindered and spoiled, and since this error cannot be corrected in the second digestion, the Blood must needs be disturbed, and a febrile Effervescence arise in such tender Bodies.

§. 3. Cure.

Agues, though they seldom afflict Children, yet they are easily cured; Quotidians and Tertians by Vomits, I wish we had safer and gentler means! In this case therefore a little of the emetick Syrup may be given in Mint or Fenil Water, at several times. But we must have a care of Antimoniates. The safest way therefore is to purge, which evacuates the same Matter another way. You may therefore give a Potion of Senna, Rhubarb and other things by spoonfuls. I have often prevented the Fit and cured an Ague by giving a Clyster before the Fit came. These things premised, we may betake our selves to alteratives, and in Children's Agues, I would above all things commend Spirit of Sal Ammoniack, or instead of it the fixt Salts of Herbs; *carduus benedictus*, Wormwood, lesser Centaury, &c. or *arcanum duplicatum Mynsichti*, mixt with Crab's Eyes. Camphore may be hanged about the Neck. External topical Medicines should not be neglected. A febrifuge Plaster may be applied to the Wrists, or Horse-Radish and other things may be laid to the soles of the Feet.

As for the continual Fevers, the foresaid Purges and Clysters are good in them; after which, Spirit of Sal Ammoniack does the business, especially in catarrhal Fevers, coming

coming from an acid Lympha, and so will *Spiritus salis Ammoniaci Anisatus*, and *liquor cornu cervi succinatus*. In these catarrhal Fevers, I prefer tincture of Myrrh before all other Febrifuges. Absorbents also must not be neglected of which *pulvis febrilis Ludovicianus* is one of the best; or this following;

Take of Powder of Crab's Eyes twelve Grains, Cinnabar of Antimony four Grains. Mix them. Make a Powder. Divide it into four equal parts.

For such as are weaned *liquor tartari*, or *salis Ammoniaci cum oculis cancrorum puncti*, is best.

If the Fever be burning and the Child be thirsty, it is good at first to give a Vomit or a Purge, to get the viscid Matter out of the first ways, and then to give often a spoonful of the following or some such mixture;

Take of Water of *carduus benedictus*, *Scorzonera* each one Ounce and an half, *Antimonium Diaphoreticum* one Scruple, Harts-horn prepared without

Fire half a Drachm, Sugar-candy what is sufficient. Mix them for the ordinary drink.

Or a Decoction of Harts-horn may be given. *Ettmuller* commends Horse dung tied in a Cloth, and steeped in the ordinary drink.

For the elder sort, *nitrum Antimoniatum*, *arcantum duplicatum*, and divers acid Juleps are proper: for instance;

Take of Water of Sorel, *Scorzonera* each two Ounces, *tinctura corroborans*, or tincture of the cordial Flowers or of Daisie one Drachm, *Syrupus acetositarum ciceri*, what will make it pleasant. Mix them.

Spaw. Waters or *lapis prunelle* in Whey may be given to such as are strong.

If malignity be feared, and the mixture of Blood be much disturbed, then beside the aforesaid things, Mixtures made of bezoardick and theriacal Medicines are proper, viz. of *diascordium*, *theriaca celestis*, *electuarium de ovo* and such things, which you may find before in our *Book of Fevers*.

FINIS.

